EIS
Douglas-fir

1999

Region 1 Region 6

Idaho Panhandle National Forests Record of Decision and Summary of the

Douglas-fir *Beetle Project*

FINAL

Environmental Impact Statement

for the
Idaho Panhandle
National Forests
and
Colville National Forest

Regenerated Forest

Aquatic Restoration

Fuels Reduction

1999

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

Douglas-fir Beetle Project

Record of Decision

USDA Forest Service
Northern Region
Idaho Panhandle National Forests
Coeur d'Alene River and Priest Lake Ranger Districts
Kootenai, Shoshone and Bonner Counties, Idaho, and Pend Oreille County, Washington
June 1999

Lead Agency: USDA Forest Service

Responsible Official:

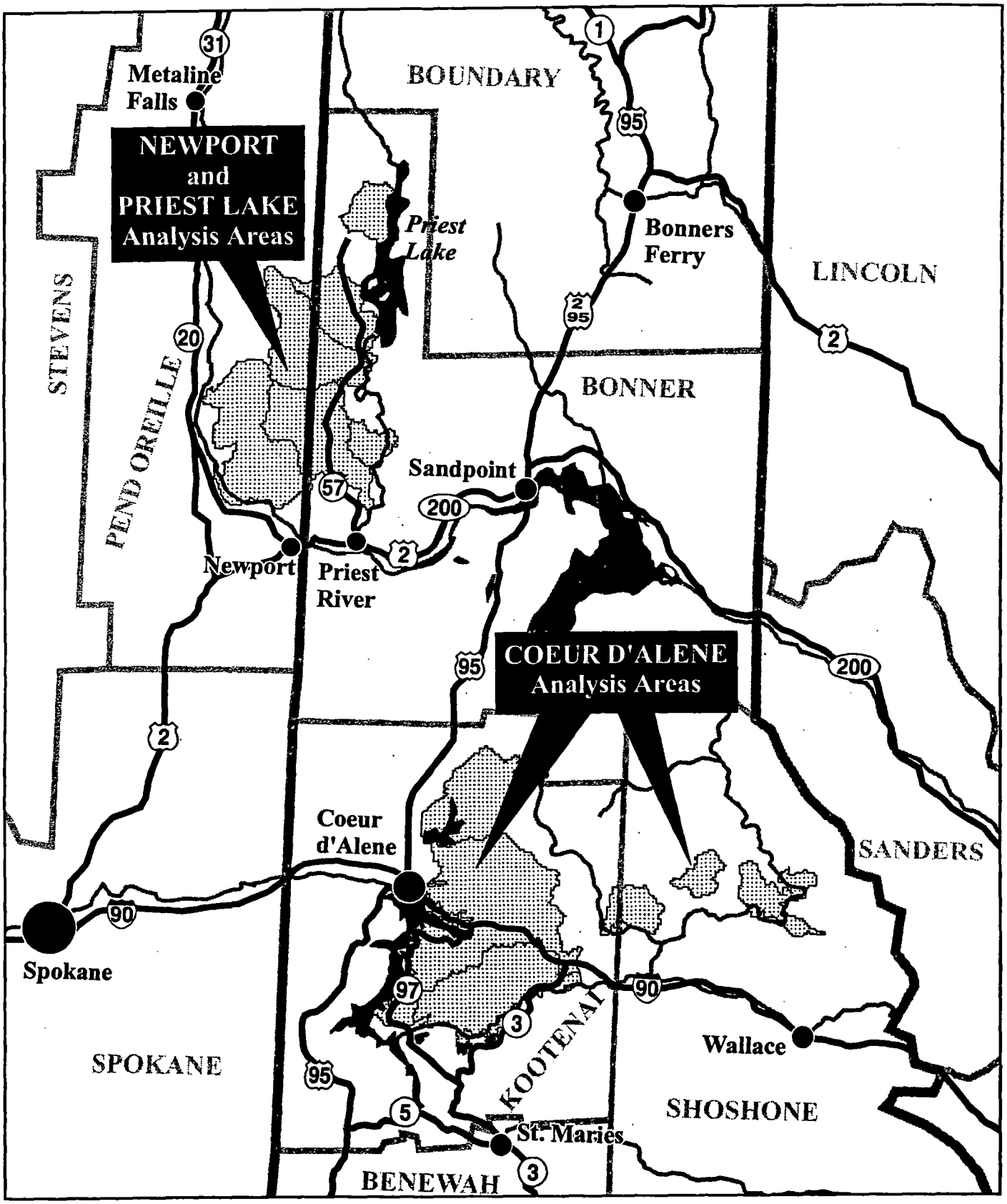
David J. Wright
Forest Supervisor
Idaho Panhandle National Forests
3815 Schreiber Way
Coeur d' Alene, ID 83815

For Further Information Contact:

Brad Gilbert
Operations Team Leader
Idaho Panhandle National Forests
3815 Schreiber Way
Coeur d'Alene, ID 83815
(208) 765-7233

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Person with disabilities who require alternative means of communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at (202)720-2600 (voice and TDD). To file a complaint, write the USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Ave., SW, Washington, DC 20250-9410, or call (202)720-5964 (voice or TDD). USDA is an equal employment opportunity provider and employer.

Vicinity Map



Organization of this Document

This Record of Decision and Douglas-fir Beetle Project Final Environmental Impact Statement Summary **have been combined** in one booklet to avoid duplication while being responsive to requests from the public to receive both documents. The following table shows how this combination has been organized. All required elements of the ROD and FEIS Summary have been included.

TABLE OF CONTENTS

Record Of Decision

Cover sheet 1

Vicinity Map 2

Table of Contents - Record of Decision 3

Table of Contents - FEIS summary 4

Introduction 5

Decision 5

Background and Scoping/Public Involvement 8

Location of Project Area 8

Selected Pictures of Activities p-1 thru p-7

Context for the Decision 9

Decision Rationale and Criteria 11

Alternative Development 18

Alternatives Considered in Detail But Not Selected 18

Features, Mitigation and Monitoring for Decision 25

Legal Requirements 27

Environmentally Preferred Alternative 33

Exemption 34

Implementation Date and Appeal Rights 34

Signature and Date 35

Appendix A - Site Specific Road and Unit Information 36

Maps of Selected Alternative

TABLE OF CONTENTS

FEIS Summary

Availability of the FEIS and Record of Decision 1

Changes between Draft and Final EIS 1

Background of Summary 2

Project Area 5

Purpose and Need 6

Proposed Action 8

Scoping 8

Alternative Development 9

Key Issues 10

Alternative Description 12

Comparison of Effects of the Alternatives 20

INTRODUCTION

This Record of Decision documents my decision to select management activities for the Coeur d' Alene River and Priest Lake Ranger Districts of the Idaho Panhandle National Forests in response to the Douglas-fir beetle outbreak. First of all, I want to thank the individuals, organizations and agencies which provided constructive, site-specific comments for this project. This input was very valuable to me in making my decision.

In the following document, I explain my reasoning for this decision. Please note that in many cases, information in this Record of Decision (ROD) refers to the Douglas-fir Beetle Final Environmental Impact Statement (FEIS) or Summary. Please see these documents for more detailed information. This Record of Decision applies only to the Idaho Panhandle National Forests; a separate ROD applies to the Colville National Forest.

I have been delegated the authority and am the Responsible Official for the decisions outlined in this Record of Decision.

DECISION

I have completed my review of public comment, and analysis contained in the Douglas-fir Beetle Project Final Environmental Impact Statement. I have reached the conclusion that immediate action is necessary to protect biological and social ecosystem values and opportunities which would be lost in areas infested by the beetle. I believe that this is also an opportunity to improve existing roads which are contributing to unhealthy watersheds on the Coeur d' Alene River and Priest Lake Ranger Districts.

I believe that selection of the Alternatives, as described below, is the responsible and scientifically sound response to an ever- changing forest condition. These actions will trend the forest toward a more sustainable forest condition. **This decision fully incorporates the design features, mitigation measures and monitoring requirements presented in Chapter II of the FEIS on pages II-33 through 56.**

As we developed our proposal to respond to the Douglas-fir beetle infestation, we defined our approach by carefully considering what we would and what we would not do. The following constraints were maintained throughout the analysis and are part of my decision. 1) We are not entering roadless areas. 2) We are not adversely impacting plant species viability nor terrestrial and fish species viability. 3) We are not adversely impacting heritage resources. 4) We are not adversely impacting old growth.

Coeur d' Alene River Ranger District Decision

I have decided to implement Alternative A, the No Action Alternative, for the Steamboat and Bumblebee watersheds and I have decided to implement Alternative D of the FEIS for all other watersheds, which includes the following activities. Details for

roads and harvest units for the selected alternative are noted in the accompanying Appendix A of this document and in the enclosed maps at the back of the Summary document. (These numbers have been adjusted from the Final Environmental Impact Statement (FEIS) to remove activities within the Steamboat and Bumblebee watersheds.)

Aquatic restoration and improvement roadwork which will be accomplished includes an estimated 81.0 miles of road removal, 18.4 miles of road reconstruction, and 1.0 mile of road relocation. Approximately 151 stream crossings will be removed and 82 stream crossings will be improved to reduce risk of failure. An estimated five miles of fish migration access will be achieved. This represents a substantial increase from Alternative D of the DEIS, as there are now more than twice as many miles of road removal and numbers of stream crossings removed or improved. Changes between draft and final are explained in the Chapter II of the FEIS, Changes between Draft and Final.

Fuels treatment on an estimated 12,019 acres, including 1,746 acres of prescribed burning, 89 acres of pile and burn, and 10,184 acres of mechanical methods such as yard tops and lop and scatter. Approximately 180,000 tons of hazardous fuels will be removed.

Vegetation restoration through tree harvesting on an estimated 12,019 acres on 324 units which includes 9,765 acres of selective removal of dead and dying trees, 1,161 acres of improvement harvest and thinning, 1,093 acres of regeneration harvest and associated planting of desired species such as western white pine, western larch, and ponderosa pine trees. These activities represent harvests in currently infested stands and other nearby hazard stands **only if** these nearby stands become infested.

Additional road work necessary to access infested stands includes an estimated 3.9 miles of new permanent system road, 7.4 miles of road reconstruction, and 13.4 miles of temporary road construction. Temporary roads are for harvest access only and will be obliterated after use. *(This is a reduction from 21 miles of permanent road construction for Alternative D in the DEIS to 4.9 miles of permanent road construction (includes 1 miles of relocation) for Alternative D of the FEIS.)*

Logging systems to be used include tractor, skyline and helicopter. Percentages for each logging system by volume are approximately 11% tractor, 37% skyline and 52% helicopter.

If funding becomes available, additional work to be done includes obliteration of approximately 32 miles of road, 4 miles of trail relocation, additional existing noxious weed infestation evaluations and treatments, white pine pruning, precommercial thinning, and wildlife habitat underburning. All of these activities would be subject to review and consultation with the US Fish and Wildlife Service.

Priest Lake Ranger District Decision

I have selected to implement Alternative D of the FEIS, which includes the following activities. Details for roads and harvest units for the selected alternative are noted in the accompanying Appendix A of this document:

Aquatic restoration and improvement roadwork which will be accomplished includes approximately 54.7 miles of road removal, 67 miles of road reconstruction and .8 miles of road relocation. Approximately 43 stream crossings will be removed and 50 stream crossings will be improved allowing 5.6 miles of new fish migration access.

Fuels treatment on approximately 7,483 acres, includes 3,705 acres of prescribed burning, 612 acres of pile and burn, and 3,167 acres of mechanical methods such as yard tops and lop and scatter. Approximately 243,000 tons of hazardous fuel will be removed.

Vegetation restoration through tree harvesting on approximately 7,483 acres within 289 units. This includes approximately 3,429 acres of selective removal of dead and dying trees, and improvement harvest and thinning; and 4,054 acres of regeneration harvest and associated planting of desired species such as western white pine, western larch, and ponderosa pine trees. Inclusive in the acreage of selective harvest is removal of dead and dying Douglas-fir beneath dry-site old growth ponderosa pine on approximately 340 acres. These activities represent harvests in currently infested stands and other nearby hazard stands **only if** these nearby stands become infested.

Additional road work necessary to access infested stands includes approximately 14 miles of road reconstruction and approximately 14.8 miles of temporary road construction. Temporary roads are for harvest access only and will be obliterated after use. *(This is a reduction of 1.2 temporary road miles from Alternative D of the DEIS.)*

Logging systems to be used include tractor, skyline and helicopter. Percentages for each logging system by volume are approximately 15% tractor, 44% skyline and 35% helicopter.

If funding becomes available, additional work to be done includes: obliteration of approximately 40 miles of road, .5 miles of road reconstruction, additional existing noxious weed infestation evaluations and treatments, additional sensitive plant monitoring, white pine pruning and precommercial thinning. These activities would be subject to review and consultation with the US Fish and Wildlife Service.

Timing of the Decision

The issue of recovering value from the dead and dying trees was an influence on the timing of my decision. The combined effects of sap rot, weather checking, and felling breakage could result in volume losses of 20 to 30 percent by the third year after death and would result in a value shift from lumber products to pulp (Projected Deterioration of Beetle-killed Douglas-fir on the Idaho Panhandle National Forests, David Evans and Associates report, 1999).

Some of the commercial value is already gone which translates into less recovery of value and diminished ability to reinvest in restoration projects. If I decided not to remove some of the material now, I would not likely be able to remove it later. If I wait until the summer of 1999 is over before making this decision, even more losses are expected.

BACKGROUND AND SCOPING/PUBLIC INVOLVEMENT

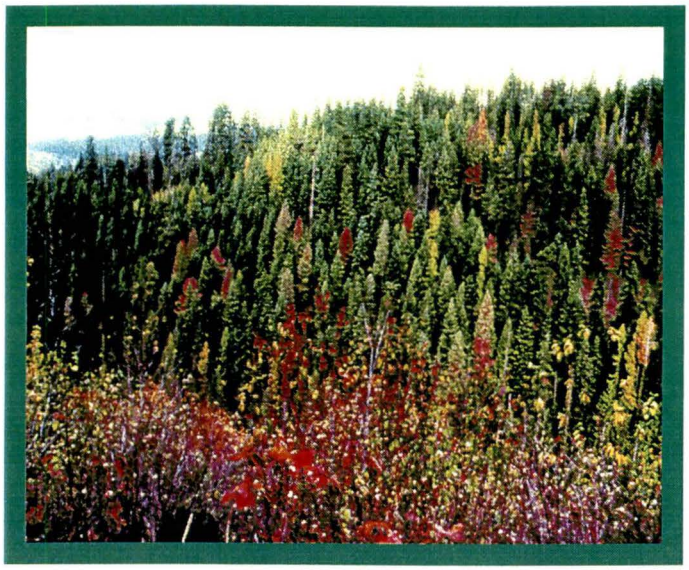
In forests all over northern Idaho and eastern Washington, Douglas-fir trees are dying and turning red as a result of the Douglas- fir bark beetle. The Douglas-fir bark beetle is boring into trees, reproducing and killing vast amounts of Douglas-fir. These beetle populations increased after breeding in trees damaged by snow, wind and ice during the winter of 1996/1997. The Idaho Panhandle and Colville National Forests collaborated on studies to evaluate the true extent and possible expansion of the outbreak. Forest entomologists are saying that this outbreak is the largest noted in the area for 40 years. In November 1998, a team completed an assessment of the situation and published a report (Outbreak Incident Report) with recommendations. This project has developed as a recommendation from that report. The background and history of this project are described in the attached Summary and Chapter I and II of the FEIS.

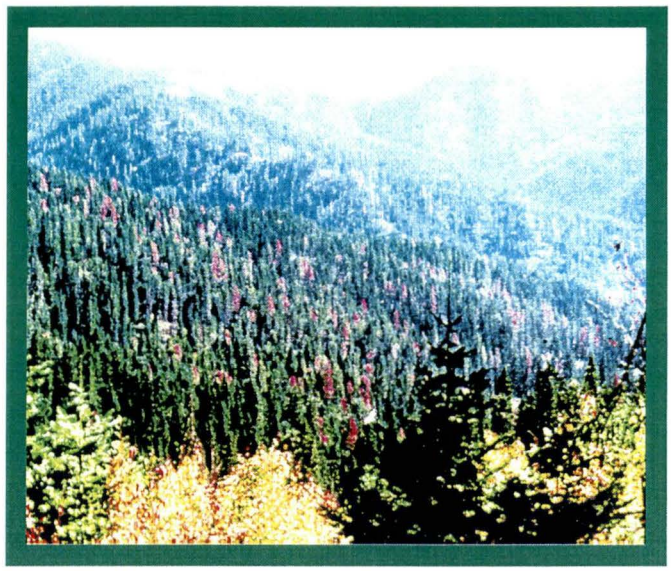
The scoping and public involvement process was extensive with over 50 presentations to organizations such as Rotary Clubs, Chambers of Commerce and professional societies; seven open houses; associated Federal Register Notices, news releases, mailings, news articles and radio reports. In total, over 1000 comment letters were received. This process is summarized in the attached Summary and more detail is presented in Chapter II of the FEIS and the project file.

LOCATION OF PROJECT AREA

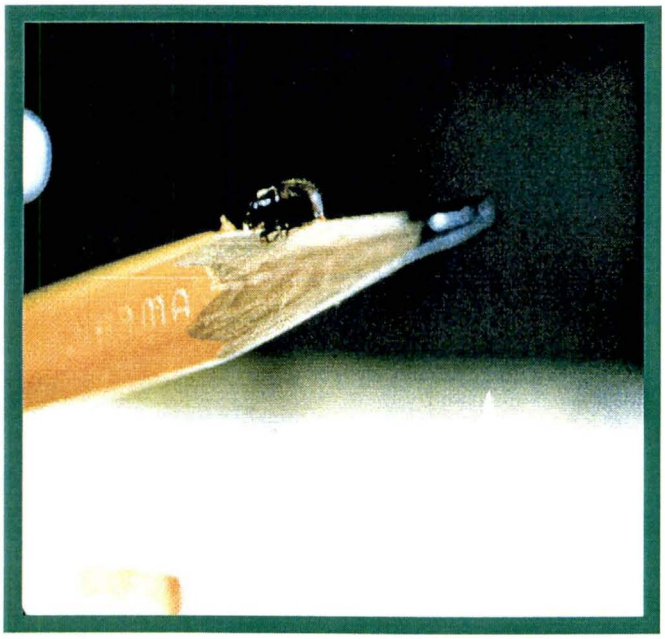
The project areas include approximately 730 square miles of National Forest System land for this Record of Decision. These are illustrated in the attached vicinity map and selected alternative maps included in this packet. For the listed watershed areas, please see the attached Summary on pages S-5, S-6 and for further details see Chapter III of the FEIS under each resource. In general, it is described as a portion of the National Forest lands within Kootenai, Shoshone and Bonner counties, Idaho, and Pend Oreille County, Washington. The FEIS included additional lands in the State of Washington on the Colville

SCOPE OF THE PROJECT



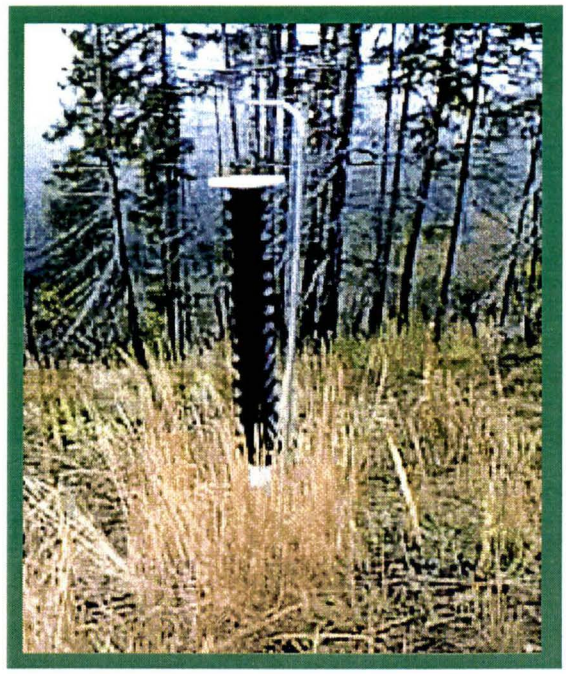


The douglas-fir bark beetle infestation has reached epidemic levels in the Idaho Panhandle and Colville National Forests. Trees that have been killed by the Douglas-fir bark beetle are apparent by their red needles. The infestation has the potential for expansion. Areas with the highest concentration of bugs are neighboring Coeur d' Alene and Hayden Lake Idaho. In addition to these areas a mosaic of more remote forested areas are also infested.



The douglas-fir bark beetle is small in size but gains strength in numbers. It takes approximately 1,000 beetles to kill a tree. They accomplish this by boring into the bark of a tree and chewing vertical galleries in which they lay their eggs. As these eggs hatch, the young beetle larvae chew tunnels in a horizontal direction around the tree, ultimately girdling the tree. A year later, the new hatch of beetles will then bore exit holes through the bark of the tree and fly to a new food source. Approximately one year later, the tree is dead. There is no chance for recovery.

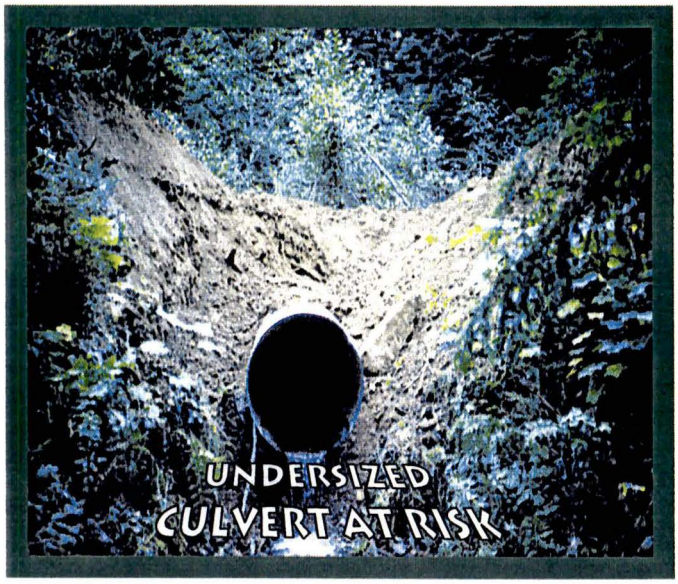
STRATEGIES TO REDUCE THE INFESTATION

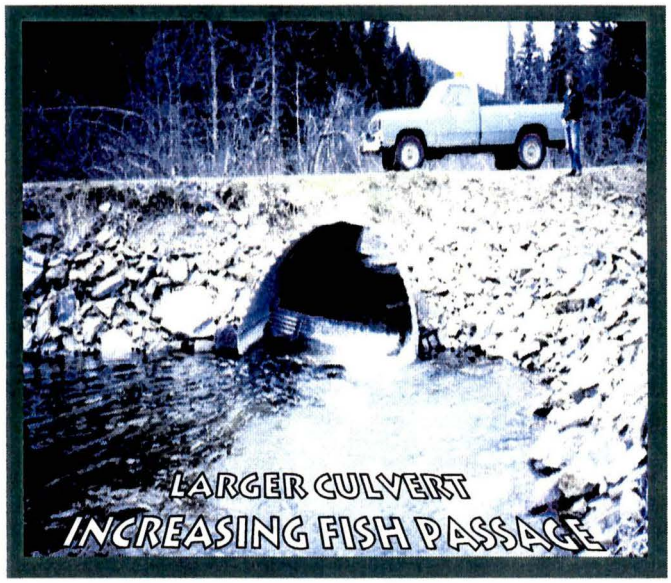


The douglas-fir bark beetle population can be reduced by several different means. The picture on the left shows a pheromone packet that can be used to discourage the beetles from entering a particular stand or an individual tree. The picture on the right shows a bark beetle trap, that when used with an attractant pheromone traps and kills the beetles. The pheromone research and application currently underway on the Idaho Panhandle National Forest is separate from this EIS. (Douglas-fir Beetle Pheromone Study Project. March 9, 1999: Decision Memo.)

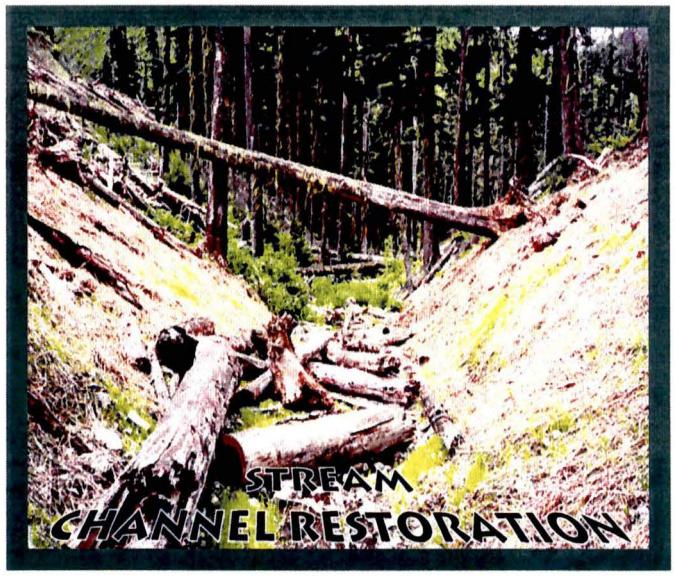
Timber harvest is another way to reduce the bark beetle population. Harvesting the beetle killed trees while they are still underneath the bark removes both the parent bug and the larvae to the mill where they are killed.

AQUATIC RESTORATION



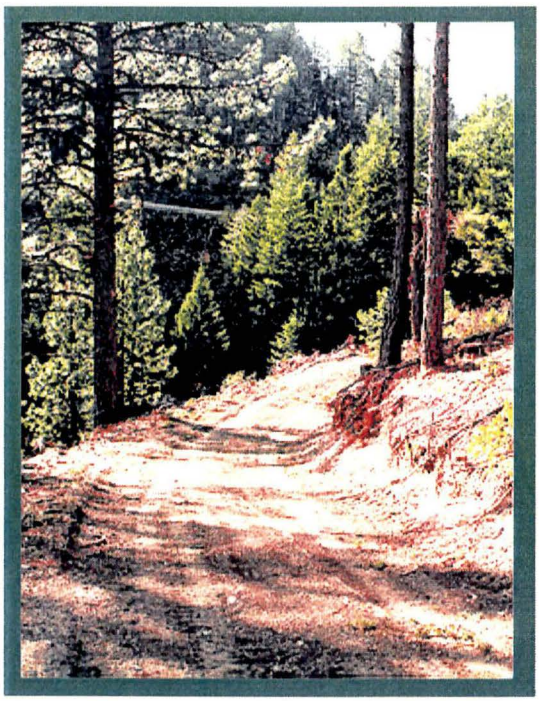


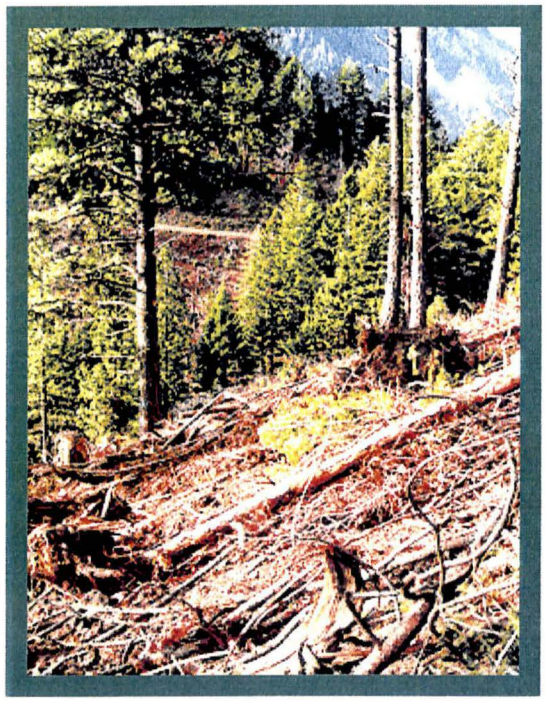
Revenue generated from timber harvest will be used to satisfy project objectives. An objective for aquatic restoration is to reduce risk to fish populations and excess sedimentation in the aquatic ecosystem. On the roads necessary for administrative and public access, within beetle infested areas, undersized culverts will be replaced with culverts of appropriate size. (As illustrated above.)



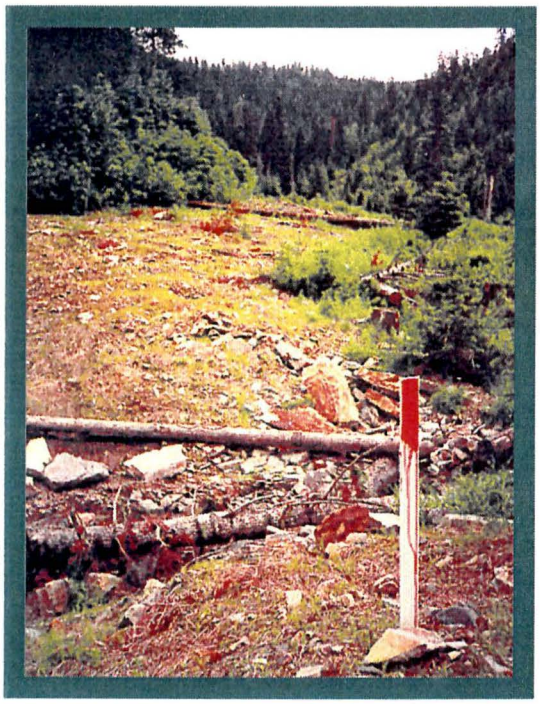
Increasing fish passage and reducing sedimentation are among project objectives. This can be accomplished by removing culverts that are no longer necessary and reconstructing the stream channel (left picture). The picture on the right shows a stream crossing that has been obliterated and a stream channel that has been armored to prevent erosion.

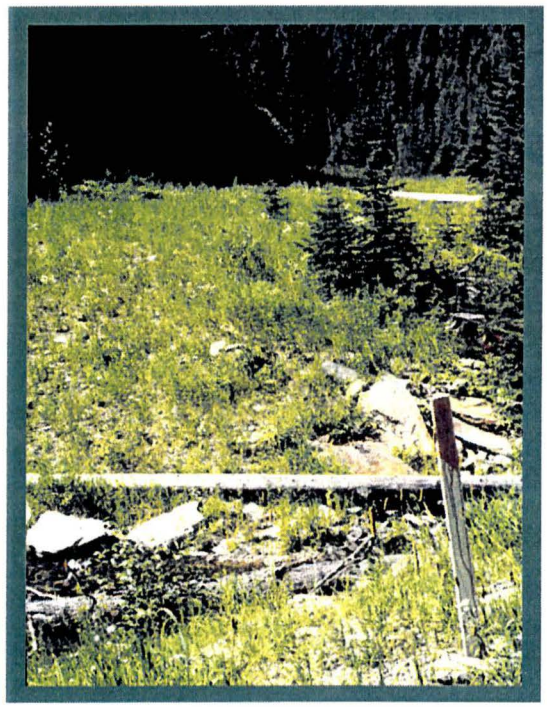
AQUATIC RESTORATION





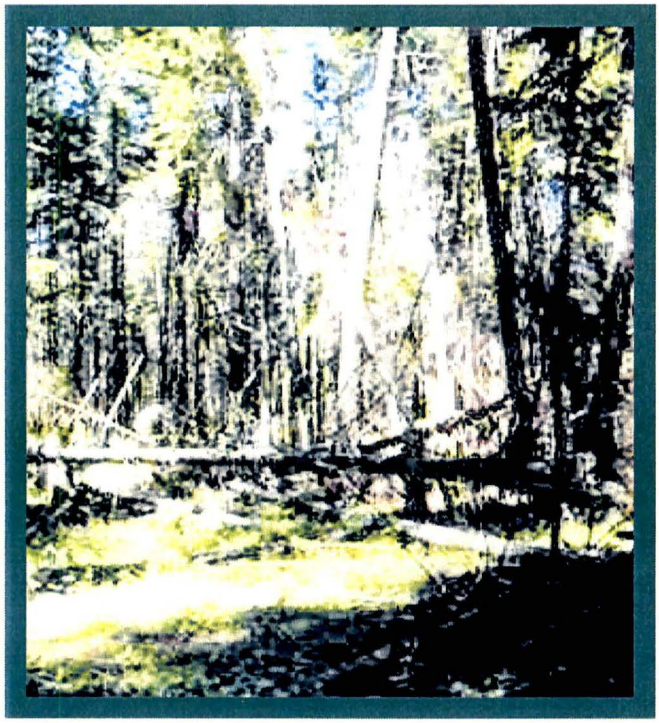
Road obliteration involves pulling the fill dirt into the road prism, and reconstructing the slope over the existing road. The recontouring process is then followed by pulling large woody debris of varying sizes over the slope to provide for nutrient cycling and micro-site development for tree planting. These pictures show before and after shots of road obliteration taken at the same location.

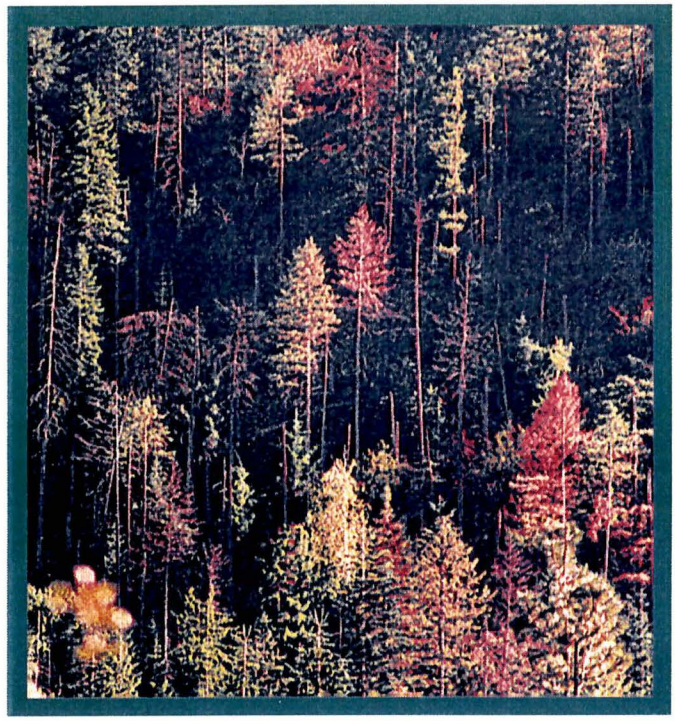




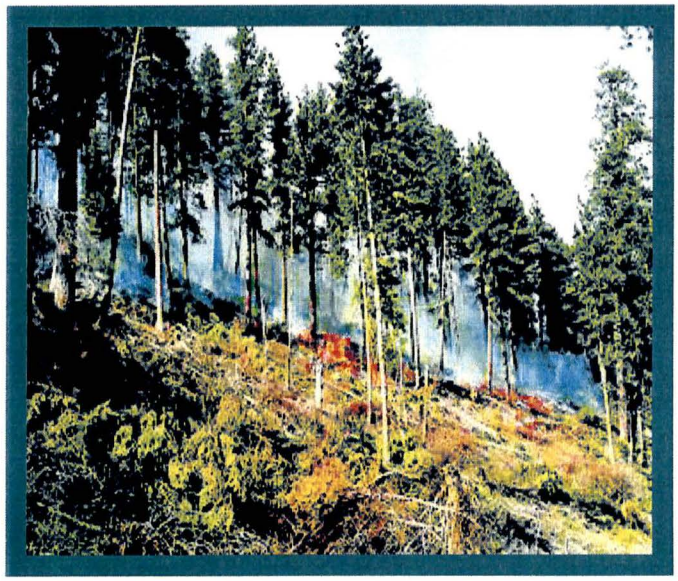
An example of a road obliterated that was encroaching a stream. The first photo is taken one year after the removal, and the following one is five years after that. This reduces sediment that erodes into the stream, restoring the aquatic ecosystem.

FUELS AND FIRE SITUATION



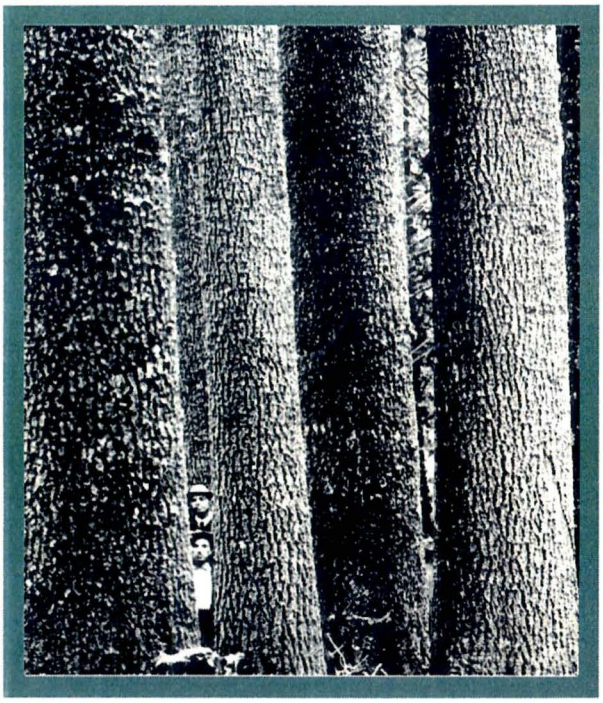


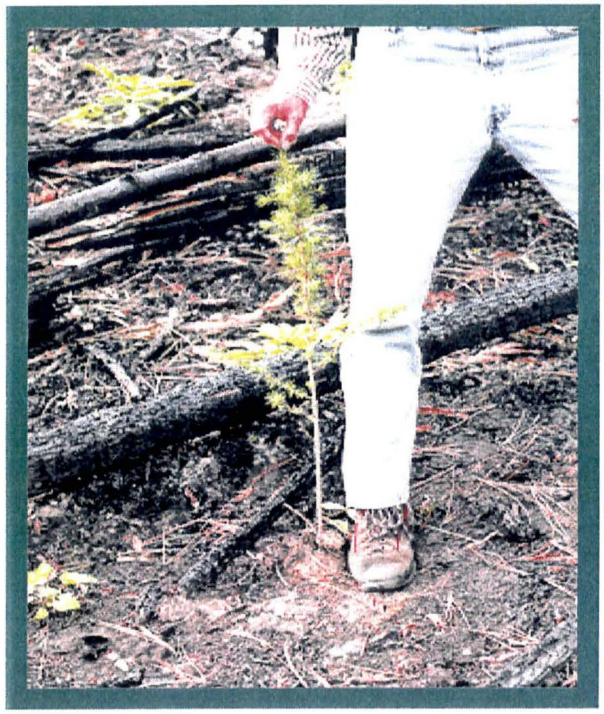
The vegetative mortality caused from the bark beetle results in significant fuel accumulation in the forest. The excess fuel makes the stands very susceptible to catastrophic wildland fire. This heavy fuel accumulation increases the heat intensity of the fire which has the potential cause damage to the soil.



Of particular concern are those areas that have significant fuel accumulation in the wildland urban interface. The photo on the right depicts a low intensity prescribed fire which reduces hazardous fuels that could feed a catastrophic wildland fire. The photo on the left depicts a high intensity crown fire in close proximity to the urban interface where excess fuels have not been treated.

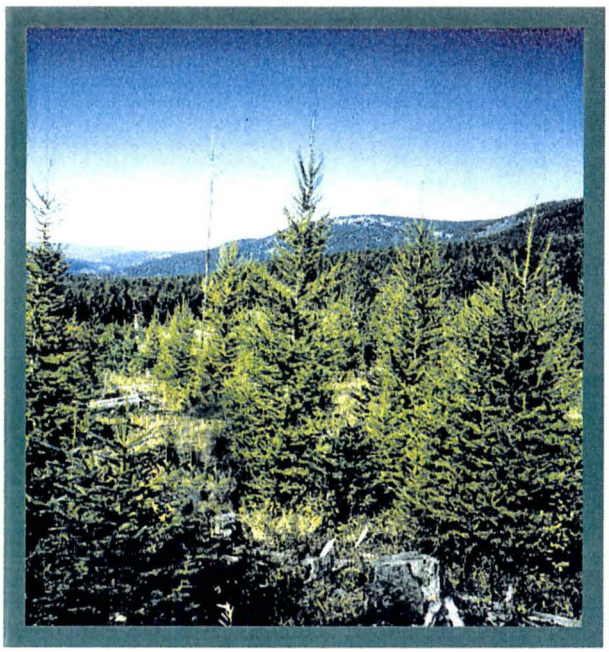
REGENERATION HARVEST

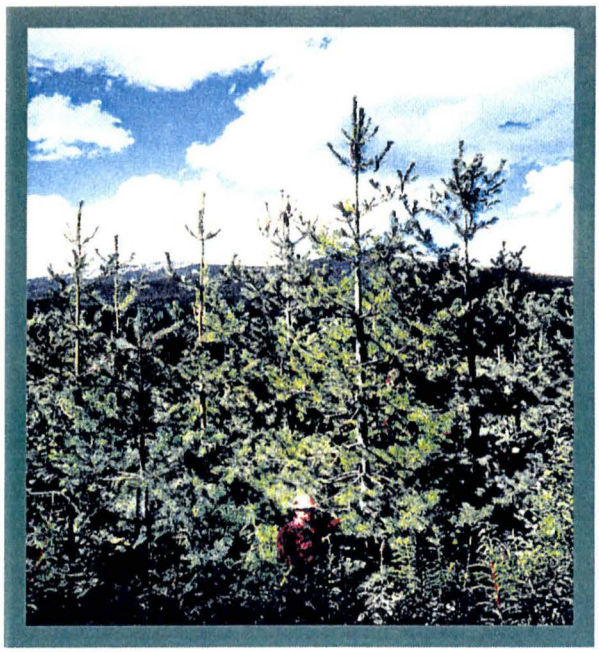




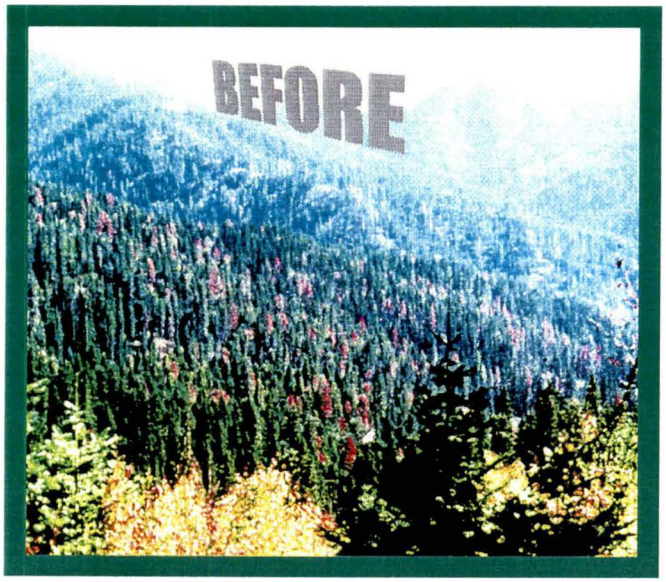
Historically the Idaho Panhandle National Forest and Colville National Forest was composed with a far different stand structure than what is present in the forest today. The change in species composition is a result of decades of historic logging practices and fire exclusion.

The bark beetle is only one symptom of forests out of balance. Douglas-fir stands are now twice as abundant in northern Idaho as they have been in the past. More than 90 percent of the stand composition of 50 years ago, which included western white pine, ponderosa pine, and larch has been lost. The photo on the top left depicts a historical stand of western white pine on the Idaho Panhandle National Forest. The remaining photos show regeneration of historic seral species from initial planting through 14 years of growth.





SELECTIVE HARVEST



Visual quality is another factor taken into consideration on this project. The two pictures above show the change in scenery from before to after. The trees that have been killed by the douglas-fir bark beetle (left picture) have been selectively harvested, the picture on the right is a computer depiction of what it would look like with dead and dying trees removed.

Some of the acreage that has been hit hardest by the douglas-fir bark beetle is in the close vicinity of Hayden Lake, as the picture above shows. This photo represents the aesthetic values considered upon the completion of selectively harvesting dead douglas-fir trees. Visual impacts will be minimized, and restoration will be maximized.

National Forest, Pend Oreille County, Washington, but these lands are covered under a separate ROD.

CONTEXT FOR THE DECISION

The 1987 Idaho Panhandle Land and Resource Management Plan (Forest Plan) provides the primary legal context for this decision, but numerous more recent and evolving National policies and new scientific information provide further context for the inclusion of ecosystem management principles into the decision making process. These broader scale decisions narrow the scope of the purpose and need of the proposed action. As part of my adaptive management philosophy, I have tiered this project decision to the following programmatic direction and policy.

On July 28, 1995, the Regional Foresters of Regions 1, 4, and 6 jointly issued a Decision Notice and Finding of No Significant Impact for the Inland Native Fish Strategy Environmental Assessment, known as INFS. This interim direction amended the Forest Plan, and is designed to protect native fish populations by providing management guidelines and monitoring requirements along streams in designated watersheds for all activities.

The Federal Wildland Fire Policy which was adopted by the Departments of Agriculture and Interior land management agencies in December 1995, describes the commitment all of us have made to firefighter and public safety, our first priority. No resource or property value is worth endangering people; and all of our actions and our plans must reflect this commitment. Our second priority is to protect resources and property, based on the relative values to be protected. As natural resource managers we must make prudent decisions based on sound assessments of all the risks. Good management reduces the likelihood of catastrophic fire by investing in risk-reduction measures and recognizes when nature must take its course. The Policy provides for both fire suppression and wildland fire use where appropriate.

In August 1995, Ecosystem Analysis at the Watershed Scale was issued to be used as a primary tool for generating information to implement ecosystem management. This watershed analysis is essentially ecosystem analysis at the watershed scale that is applied anywhere that a landscape approach to watershed analysis is desired. Steps include characterizing the watershed, focusing on the issues, describing and understanding current and historical conditions and processes, interpreting results, and developing recommendations for subsequent actions. The Idaho Panhandle National Forests utilized the principles of ecosystem analysis at the watershed scale approach throughout this project.

The Interior Columbia Basin Ecosystem Management Plan Draft Environmental Impact Statement, (1997), and Assessments of Ecosystem Components, (1997) and EIS Alternatives by the Science Integration Team, (1997), stresses that agencies' success in solving basin-

wide problems rests with appropriate site-specific decisions which utilize broad-scale findings. We reviewed the science reports and incorporated the information into our analysis. No decision or guidelines for analysis were made using draft direction from the DEIS issued for the Interior Columbia Basin Ecosystem Management Project.

I must note that the Eastside Draft Environmental Impact Statement issued in 1997, (one of two Interior Columbia Basin Ecosystem Management Project EISs for which no decision has been issued) was not utilized in design of this project. While I considered the science assessment, I did not predicate my decision on the selection of any particular alternative.

The Natural Resource Agenda for the 21st Century, March 1998, has been adopted as the policy of the Forest Service. Watershed restoration and maintenance, sustainable forest management, outdoor recreation, and a scientifically based forest road policy that meets the needs of Americans and protects the environment are the four focal components of the agenda. From the onset, project design focused on meeting key objectives of the Agenda. First, watershed restoration in areas where the Douglas-fir beetle epidemic is killing trees is a primary purpose of this project. Second, the project design accomplishes trending our forests toward a more sustainable condition by improving resiliency to insect epidemics and fire in the future.

The Government Accounting Office (GAO), April 1999 Western National Forests - A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats has recently reported to Congress that the increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires is the most extensive and serious national forest health-related problem in the interior West. Large fires are expensive, and compromise the Forest's ability to provide timber, outdoor recreation, clean water, and other resources. Unwanted fires also pose increasingly grave risks to human health, safety, and property, especially along the boundaries of forests where population has grown rapidly in recent years.

The Government Accounting Office also testified before House subcommittee on Forest Service: Barriers to and Opportunities for Generating Revenue, by Barry T. Hill, on February 10, 1999. This testimony summarized the shift in administrative, legislative and judicial interpretations of the law which have moved the agency from emphasizing uses that generate revenue, such as producing timber, to those that do not, such as protecting species and their habitats. New proposals are before Congress such as the recreational fee demonstration program to pay for visitor services, repairs and maintenance, and resource management. Difficult tradeoffs exist between boosting revenue, and other values such as providing access, promoting economic stability of historic commodity uses, and setting aside more lands for resource protection and conservation. This FEIS analysis addresses the financial costs of watershed restoration and my decision uses the timber sale contract to accomplish most of the needed work without depending on additional appropriated funds.

The Office of the Inspector General (OIG) completed an evaluation of the Forest Service Timber Sale Environmental Analysis Requirements in January of 1999. The OIG noted deficiencies in Forest Service environmental documentation and recommendations for improvement. One of the recommendations was that the Forest Service review methods and direction for monitoring the implementation of decisions, including mitigation measures, and carry out and document such implementation. I have directed my staff to develop a Monitoring Plan and Implementation Guide which will follow this Record of Decision. This workbook will list items that need to be incorporated into the timber sale contract, will certify that my decision in this Record becomes design criteria for the project and will provide the tracking mechanisms needed for project implementation.

There are no Forest Plan or RARE II roadless areas impacted by the decision. I reviewed the Interim Road Rule, which went into effect March 1, 1999, which affects management of areas that are contiguous to existing defined roadless areas and I reviewed our alternatives in view of this new direction. The selected alternative is consistent with the interim road rule. See Appendix A of the FEIS for response to public comment.

An interdisciplinary team of resource specialists was convened in October of 1998 by me (Dave Wright, Supervisor of the Idaho Panhandle National Forests), and Robert Vaught, Supervisor of the Colville National Forest to assess the current and anticipated scope of the Douglas-fir bark beetle outbreak on the Forests utilizing the Federal standardized six step Ecosystem Analysis at the Watershed Scale approach. In their Outbreak Incident (November 1998) report, the team described current resource conditions, existing and potential impacts of the Douglas-fir beetle outbreak, resources at risk and resource improvement opportunities, and initial recommendations for treatment. The team recommended and prioritized specific areas for detailed study and proposed actions under site-specific environmental analysis.

In Health of Idaho's Forests - A Summary of Conditions, Issues and Implications, (Idaho Department of Lands and Forest Service, May 1999) the authors state that the ability of a forest to sustain itself and provide what society wants and needs is what defines a healthy forest. The report further recognizes that with the ever- increasing population in the wildland urban interface throughout Idaho, there are concerns for fire management. More fire starts in conjunction with dense forests and hot or windy weather conditions, increases the possibility of fires capable of destroying homes and putting human lives at risk. The fire and fuels analysis reflects my concern and the public concern for the increasing fuel load caused by the Douglas-fir beetle outbreak, both on National Forest lands, and on adjacent State and private lands.

DECISION CRITERIA AND RATIONALE

During the decision making process for this project, I realized that I would not be able to fully satisfy all public concerns, as many of them are mutually exclusive. Based upon public comment, numerous changes have been made between the draft and final EIS. I

have selected alternatives that are based upon the best science available which demonstrates ecological benefits to the water, fisheries and vegetation resources, contributes to hazardous fuels reduction and meets my expectations for public and fire-fighter safety. I believe these are sound ecological decisions, both for the short and long term. My decision also includes a practical restoration approach that reflects sensitivity to many conflicting public concerns. Decisions of this kind are constrained by varieties of policy and direction. For a full understanding of my decision, please see the section "Context for the Decision" of this document. In making this decision, I considered the following criteria:

- Purpose and need for action
- Relationship to key issues and public comment
- Consistency with Forest Plan standards, goals and objectives
- Compatibility with other agency goals, Federal Laws and Regulations.

Purpose and Need

The purpose and need for the project is to: Respond to the Douglas-fir beetle outbreak by restoring vegetative and aquatic ecosystems utilizing timber harvest and the recovered value to accomplish the restoration objectives. Funds would be used to plant ponderosa pine, western larch and blister rust resistant western white pine, improve drainage structures on roads, to close unneeded road segments, reconstruct roads, relocate roads, and remove hazardous fuels.

There is a direct relationship between the purpose and need for action for this project and the Forest Plan. The purpose and need thoroughly describes localized project goals which are developed from overall Forest standards, guidelines and goals as stated in the in the Forest Plan. It is the purpose of the Environmental Impact Statement and Record of Decision to examine opportunities for project scale activities based upon the localized purpose and need for action; to determine whether to implement activities at this time; and if so, to identify the selection, location, and scheduling of these activities and specific mitigation measures necessary to achieve Forest Plan objectives for resources in the area.

The purpose and need is generated by the difference between current and projected conditions in the project areas and the desired conditions for the resources. The desired condition developed for this project area is consistent with Forest Plan Direction. Please see the Summary for more details. I feel my selected actions best meet the stated purpose and need for the project, and here is why I have selected it over the other alternatives.

The selected alternative responds to the purpose and need in many ways. Perhaps the most important achievement of this alternative is that substantial value recovery from dead and dying trees is captured and translated into restoration of the aquatic elements of the ecosystem. By road removal, reconstruction, relocation, and stream crossing removal,

improvements to beneficial uses will occur and more fish access is gained. These are important gains in watershed health which would otherwise not occur for an unknown period of time or perhaps not at all. It provides vegetation restoration by harvesting dead, dying and a lesser amount of other trees. We will then plant the desired species of western white pine, western larch, and ponderosa pine. The project initiates the trend toward improved species composition that is badly needed to improve the resiliency and health of our forests. It reduces fuel loadings especially in the urban interface, and, thereby, over the long run, reduces the potential unwanted impacts from wildfires, should they occur. Soil productivity is protected by strong limitations on skid trail use and guidelines to ensure that nutrients are not diminished from these sites.

Relationship to key issues and public comment

Key issues and public comment are also described in the attached Summary, Chapter II and Appendix A of the FEIS. I reviewed and responded to public comment in various ways, including adding alternatives, modifying existing alternatives, and enhancing the analysis. I believe the issues identified in the FEIS (pages II-4 through II-8) captured the primary concerns raised by individuals, groups and other agencies. The following discussions explain the rationale for my decision relative to these key issues.

Issue: Level of Timber Harvest
People have many opposing points of view on this issue. The selected alternative, for all but two watersheds (Steamboat and Bumblebee), will treat acres infested with the beetle as well as additional high risk acres in the event they become infested and tree mortality occurs in them. If the bugs do not spread as predicted, the level of timber harvest and associated activities will be correspondingly lower. Timber harvesting will allow us to begin vegetation restoration of infested areas to trend forest stands towards later structural stages (i.e. larger trees) or to maintain or plant long-lived seral conifer species such as blister rust-resistant western white pine, western larch and ponderosa pine. This alternative salvages dead and dying Douglas-fir and recovers the value from these trees, which can then be used to fund the important aquatic restoration activities. These activities also will reduce the fuel loading by removal of large dead and dying Douglas-fir trees. As described in the FEIS, no management action can stop the bark beetle epidemic. There will be only a slight reduction of the population of beetles when trees are removed from the forest. However, my decision creates an opportunity for management to put early seral long-lived tree species back into the stands where the beetle is selectively removing Douglas-fir. The infestation is not as severe in the Bumblebee and Steamboat watersheds at this time when compared to other drainages on the Coeur d' Alene River Ranger District. Due to my concerns for the aquatic resource, I chose to not treat the infestation in these areas at this time. (See discussion on water resources below).

Issue: Water Resources and Aquatic Habitat
Many people were in favor of implementing watershed restoration. Since the DEIS, many aquatic restoration activities were added to Alternative D, i.e. more than twice as many

road miles removed and stream crossings removed/improved for the Coeur d'Alene River Ranger District and 25 -30% more on the Priest Lake Ranger District. The No Action alternative was selected for two watersheds. For the Bumblebee watershed, I could not with reasonable assurance demonstrate that the pollutant of concern (sediment) which caused the 303 (d) listing would not be increased. For the Steamboat watershed, because of the tremendous amount of watershed restoration work needed, and because we only evaluated beetle infested areas with this project, I could not show a tangible benefit to the water resource.

For the selected alternative, many watersheds are predicted to have long term benefits and reduced risks by implementing the listed aquatic restoration. The larger scope of harvesting for Alternative D also allows for extensive watershed restoration by treating roads having negative effects, e.g. relocating roads in close proximity to streams, removing stream crossings, reducing road density by road removal.

Issue: Road Management
There were many concerns expressed about road construction and its effects on the resources. Alternative D has been changed to reflect that concern. For the DEIS, Alternative D proposed construction of nearly 21 miles of new permanent road. Alternative D now has approximately 4.9 miles of new permanent road which will be closed to public use. Temporary road miles will be obliterated after use. There was also concern about access to the forest. This alternative preserves access to recreational sites. All alternatives limited new road restrictions to those roads where alternate local access exists or there were no other viable alternatives to mitigate the risks these roads pose to aquatic or wildlife resources.

Issue: Activities in Old Growth.
Many people do not want any activity in old growth stands. There are 340 acres of old growth ponderosa pine on the Priest Lake Ranger District that could potentially be lost to wildfire. Historically, these stands were maintained in open park-like conditions with frequent underburns. Years of fire suppression have allowed many Douglas-fir to grow in these stands. The beetles have been attacking the Douglas-fir in the understory and there are dead and dying Douglas-fir within these stands that are providing fuel ladders, contributing to the risk of a high-intensity fire that would kill the large ponderosa pine. By selectively harvesting the dead and dying Douglas-fir and understory trees that are creating a fuel ladder or are competing with the ponderosa pine and underburning, these stands could be maintained as ponderosa pine old growth. "The loss of old growth since historic times has been the most significant forest structure change. Little remains of this historic dry-site old growth" (FEIS, Chapter III, Vegetation (Changes in Forest Composition, III-370). I don't want to lose that old growth and I believe Alternative D will best support long term maintenance of these old growth acres.

Issue: Fuel loadings

The public has raised concern about the threat of fires escaping from National Forest System Lands and endangering private land values. On a landscape level, the threat of severe lethal fires as defined in the Interior Columbia Basin Science Assessment has increased by nearly 20 percent, which includes our moist forest type (Quigley et al, Integrated Scientific Assessment, pg 14, September 1996). Passive management, i.e. no management by humans, would allow dead wood and live fuel in the form of fuel ladders, to increase to the point where fuel amounts would predispose fires towards a catastrophic scenario much sooner. The risk of out-of-control wildfires with resulting threats to public safety and reduction in other resource values must be taken seriously in view of stand-replacement fire history in this area in the 1920's and 1930's. Units that were within one-quarter mile of private ownership were prioritized for intensive fuels treatment in Alternative D. It reduces fire intensities in the event of wildfires by removing dead trees that would otherwise add fuels to the already high fuel amounts left by the ice storm of 1996/1997 and decades of fuels accumulation. I believe that Alternative D effectively meets acting on behalf of public safety.

Consistency with Forest Plan Standards, Goals and Objectives

The Forest Plan and the process used to develop it represents agreements on the management and use of the Idaho Panhandle National Forests among a wide variety of people, agencies, Native American tribes, and organizations. The desired condition developed for this project is consistent with Forest Plan Direction and Standards. It is the purpose of this Environmental Impact Statement and Record of Decision to examine opportunities for these activities; to determine whether to implement activities at this time; and if so, to identify the selection, location, and scheduling of these activities and specific mitigation measures necessary to achieve Forest Plan objectives for resources in the area.

All alternatives were similar in meeting Forest Plan consistency except in the area of water quality standards and scenery management objectives. I have selected Alternative A, No Action for two watersheds. For the Bumblebee watershed, I could not with reasonable assurance demonstrate that the pollutant of concern (sediment) which caused the 303 (d) listing would not be increased. For the Steamboat watershed, because of the tremendous amount of watershed restoration work needed, and because we only evaluated beetle infested areas with this project, I could not show a tangible benefit to the water resource.

While all alternatives meet the Forest Plan scenery management standards, I recognize that Alternative D may not meet the desired visual quality objectives during the short term in some locations. I have applied all reasonable mitigations to most fully achieve the desired scenery objectives. I believe that over the long run, replacing dead and dying red trees with longer lived seral species will best provide for meeting the long term multi-resource objectives including scenery. Please see Chapter III of the FEIS under each resource for more detail.

Compatibility with Other Agency Goals, Federal Laws and Regulations

Idaho Department of Fish and Game
Please see Appendix A of the FEIS, for response to comments.

Proposed activities in the project areas were discussed several times throughout the process with biologists representing this agency. In their written comments, their chief concerns were the level of road reconstruction, grizzly bear security, goshawk nest sites, reducing road mileage and impacts from new roads.

In selecting Alternative D, I believe we have addressed their concerns through considerable modification of the design of Alternative D. Permanent and temporary road construction miles have been reduced markedly from the previous design, and estimated impacts diminished. The strategy taken throughout the FEIS is that short-term increases in sediment delivery at the site are permitted as long as they will be offset by the long-term risk reduction throughout the watershed. I believe that the restoration activities associated with road reconstruction must be taken if we are to restore fish populations.

Idaho Department of Fish and Game brought forward concerns that even slight reductions in security might impact grizzly bear populations and recovery. The cumulative effects analysis shows that slight changes in security will not impact population recovery as long as it remains above 70 percent for the Kalispell-Granite Bear Management unit (BMU) and there is no net decrease for the Lakeshore BMU. Our analysis demonstrates a net decrease in open road miles and improved effectiveness (refer to Mitigation Measures in Chapter II of the FEIS) as the agency recommended.

We have adopted the Idaho Department of Fish and Game suggestion to develop a goshawk nesting site protection plan for nest sites discovered during harvest operations. Nest searches will be conducted during implementation and nests will be protected by a buffer (see Mitigation Measures in Chapter II of the FEIS).

State of Idaho Division of Environmental Quality
Please see Appendix A, for response to comments.

Proposed activities in the project areas were discussed several times throughout the process with representatives from this agency. In their written comments, their chief concerns were air quality and water quality.

We addressed the Department of Environmental Quality concerns by expanding the discussion of the regulatory framework for compliance with air quality standards with the principal mechanism for compliance occurring through coordination with the North Idaho Airshed Group smoke management program. We also identified and discussed dispersion impacts for the nearest Class I airshed, the Cabinet Wilderness, as recommended. National

Ambient Air Quality Standards (NAAQS) were analyzed and disclosure made that PM 2.5 and PM 10 standards would not be exceeded for the alternatives.

Water quality concerns for all 303(d) listed streams in the project area and throughout the forest are shared by the Forest Service. We addressed their concerns via comment response and further analysis. The Forest Service is committed to reducing the pollutant of concern wherever possible. Our commitment to reducing sediment is not dependent upon the 303(d) listing but rather it is based on direction given by the Forest Service Mission Statement and by the direction given by the Forests Plan. We have, and will continue to protect beneficial uses and will continue to cooperate as much as possible to reverse any negative water quality trends.

United States Environmental Protection Agency
Please see Appendix A, for response to comments.

The bark beetle situation and proposed activities were discussed with representatives from EPA both formally and informally, numerous times throughout the process. We met with representatives from the Region 10 Office of the United States Environmental Protection Agency and they provided comments on the DEIS. Their chief concerns were cumulative effects and reasonably foreseeable future actions with the request for other issues to be clarified.

We addressed their concerns with the following: Cumulative effects analysis included all of the predicted existing and reasonably foreseeable projects. We have added clarification for Alternative A. Desired conditions have been added to Chapter I. The State BMP's and Forest Service's Soil and Water Conservation Practices have been added to Appendix F of the FEIS. We added more design features for Noxious Weed prevention and clarified some documentation. We will cooperate with the State of Idaho Division of Environmental Quality total maximum daily load process (TMDL) and will do nothing to compromise the process. We have described in detail the basis, both qualitative and quantitative, for how conclusions for water quality were reached, and the relationship between short-term risks versus long-term gains in water quality.

United States Department of Interior, Fish and Wildlife Service
Please see Appendix A of the FEIS, for response to comments.

Informal consultation with the Fish and Wildlife Service was conducted through many meetings and conversations since the start of this project. Written comments we received from this agency showed concern for further road construction and perceived impacts to fish and watershed. The details for consultation with Fish and Wildlife Service are presented under The Endangered Species Act section in this Record of Decision.

We addressed their concerns by modification of the alternatives and clarification of the use of scientific findings from ICBEMP. Changes between DEIS and FEIS for Alternative D

include greatly reduced number of new stream crossings, increase in the number of culverts removed or upgraded and reduced road densities in most analysis watersheds.

Other Agencies
Please see Appendix A of the FEIS for response to comments.

Comments from Idaho Department of Parks and Recreation, the City of Coeur d'Alene, and Kootenai County Emergency Services were submitted between Draft and Final EIS. Their chief concerns were impacts to trail-based recreation, buildup of hazardous fuels and related safety of the "urban forest".

Recreation concerns were addressed by a requirement that trail tread, signs and other facilities will be restored once logging operations are concluded and by keeping to a minimum the disruption to trail users. Several mitigation measures or design changes have been developed to address the full range of concerns, and may be found in Chapter II, Mitigation, or in Chapter II, Features Common to All Alternatives. The fuels buildup concern has been addressed through design features in the action alternatives which would reduce the fuel accumulations by harvesting dead and dying trees, broadcast burning, underburning, piling and burning, and other mechanical methods.

Please refer to the FEIS, Appendix A , Response to Public Comments, and the FEIS, Chapter III for further detail on how agency concerns were addressed.

ALTERNATIVE DEVELOPMENT

A full range of alternatives including a "No Action" alternative was developed based on key issues discussed earlier with design features and mitigation measures related to the issues and public concerns. The National Environmental Policy Act (NEPA) provisions and all regulations for implementing NEPA (as required under 40 CFR 1500) have been followed in the development of the Douglas- fir Beetle Project EIS and this Record of Decision. The FEIS discloses the expected impacts of each alternative, and discusses the identified issues and concerns. We fully analyzed seven alternatives and I considered each in reaching my decision. Due to public comments between the draft and final, Alternative F was expanded to include all three Ranger Districts and Alternative G was added for analysis. Nine alternatives were considered but eliminated from further study. For more detail, please see the attached Summary and/or Chapter II of the FEIS.

ALTERNATIVES CONSIDERED IN DETAIL BUT NOT SELECTED

Many alternatives are similar in their impacts for some resources. This is because great care was taken to design the action alternatives in order to respond to public concerns and other resource concerns.

Alternative A- No Action (Selected for two watersheds)
This alternative is described in the attached Summary (pg S-13) and in Chapter II of the FEIS.

Under No Action, there would be no change from current management direction or from the level of management intensity in the project area. Since these bark beetle outbreaks typically last 2-4 years and current populations of bark beetles are probably at their peak, there is likely to be considerable additional mortality within the next two years. Recent field reconnaissance by our entomologists indicates that the beetles are once again flying and infesting new trees. This will surely cause additional damage this spring and summer to some of the susceptible Douglas-fir trees. This additional damage to our forest stands will only add to the existing problem.

An issue that arose early in the process was whether or not to manage this area. The analysis however indicates that these ecosystems are seriously out-of-balance in the aquatic systems, the vegetative conditions, and are at risk for continued buildup of fuel accumulations. There is no support for the contention that passive management will restore these ecosystem components faster and more effectively than active management. Another issue was the concern from private landowners, including timber companies, that no active management (no removal of infested trees) on National Forest System lands would increase beetle breeding populations and possibly increase the spread of beetle infestation to nearby private lands. While we can't markedly reduce beetle populations on a large scale, we have attempted to be responsive to their concern of increased fuels.

Some people have commented that the insect infestation is not worthy of any action and that we are overreacting and creating an artificial crisis. This is a sincerely held opinion by some that I thoroughly reviewed as part of my analysis. As a professional land manager and resident of this community, I must respectfully disagree that we are creating an artificial crisis. The mission of the Forest Service and the laws that have been passed by Congress dictate that National Forest lands should be managed for multiple uses. The epidemic is real and I believe it would be irresponsible and create an unacceptable risk of serious negative impacts to the natural and human environment to do nothing in response.

To do nothing perpetuates an already serious problem of stands with the wrong species mix. Doing nothing perpetuates continuation of the build-up of flammable woody debris that would exacerbate the dangers of firefighting, increase the intensity of fires, and put at increased risk homes and people living within the wildland urban interface. And doing nothing forgoes the opportunity to capture the value of the insect damaged material and utilize its value to reduce the accumulation of fuels, to restore desired tree species, and to improve aquatic conditions.

I did not select this alternative throughout most of the watersheds because it failed to achieve the purpose and need in any of the watersheds and the impacts were not environmentally acceptable. Under this alternative, there would be no improvements to

watersheds or fisheries, no removal or improvement of roads, no improvement of wildlife security, no vegetation restoration and planting of desired species, and no treatment of hazardous fuels. The public value of trees which are dead and dying would not be recovered. Risks to watersheds and beneficial uses, such as fisheries, would not be diminished. Fuel hazards would continue to build, as would associated risks.

I did select this alternative for the Bumblebee and Steamboat watersheds. For the Steamboat watershed, there was inadequate, tangible improvements to water quality. The area of bark beetle infestation was quite small and the corresponding available aquatic restoration opportunities were limited compared to aquatic restoration needs for the whole watershed. For the Bumblebee watershed, the analysis did not indicate that Clean Water Act and State of Idaho Water Quality Standards could be complied with during project activities. The analysis did not with reasonable assurance, demonstrate to me that the activities proposed within beetle-infested areas would not contribute to the pollutant (sediment) which caused the streams to be listed as 303(d) listed under the Clean Water Act.

Alternative B - Proposed Action
Please see the attached summary and Chapter II of the FEIS for further description of Alternative B.

This alternative was not chosen because it did less restoration for both aquatics and vegetation and less fuels treatment than Alternative D. In comparison to Alternative D, Alternative B does a less extensive job of meeting the elements of the purpose and need for the project.

Issue: Level of Timber Harvest. Both Alternative B and D treated beetle infested acres, however Alternative B contains only beetle-infested stands and ignores the adjacent high hazard stands that may be infested. I believe that it is extremely important to anticipate the damage that the 1999 beetle flight will incur and be positioned to respond to that infestation. Alternative D provides the analysis to be responsive and allows me to proceed with restoration activities in these stands.

Issue: Water Resources and Aquatic Habitat. With less harvest units, there are also less areas that can be improved, thereby contributing much less to improved watershed conditions.

Issue: Road Management. There is very little differentiation between the alternatives with regard to the access portion of this issue, except in the miles of temporary and permanent road construction. Temporary roads would be obliterated after use. All alternatives preserve access to recreational sites. All alternatives limited new road restrictions to roads where alternate local access exists or there were no other viable alternatives to mitigate the risks these roads pose to aquatic or wildlife resources. Open road densities for all alternatives are essentially the same. For all alternatives, the more roads that are fixed

translates into more watershed improvements, which is a fundamental purpose of this project.

Issue: Activities within Old Growth. Alternative B does provide for protection of old growth through reduction of the high levels of fuels beneath the dry-site old growth stands on the Priest Lake Ranger District.

Issue: Fuel Loadings. Alternative B does not position us to be responsive to the hazardous fuels which will be created by the 1999 beetle flight. There are environmental and social consequences of not being positioned to respond rapidly. Once the value of the dying and dead trees is gone, there will be limited opportunity to remove these trees later due to excessive costs. The new hazardous fuels will fall to the ground, and, in the event of wildfire, would contribute to undesirable effects, such as increased fire intensities, severity and soil impacts.

Alternative C and Alternative E
Please see the attached summary and Chapter II of the FEIS for further description of Alternative C and Alternative E.

In essence, both Alternatives C and E contribute less to desired mix of watershed improvement, fuels reduction, and vegetation restoration than Alternative D (for all watersheds but Steamboat and Bumblebee).

Issue: Level of Timber Harvest - Alternative C: Alternative C is similar to Alternative B on this issue.

Issue: Level of Timber Harvest - Alternative E: Designed to harvest only dead trees, Alternate E does not satisfy the purpose and need for vegetative restoration as well as Alternative D. Additionally, Alternative E does not allow a timely response to anticipated infestation of adjacent high hazard stands that are likely to occur.

Issue: Water Resources and Aquatic Habitat. Alternative C has no new road construction, while Alternative E proposed temporary road construction similar to Alternative B. Temporary roads would be obliterated after use. Less road construction equates to fewer related road effects. I realize that road construction in Alternative D will result in some short term risks not found in Alternative C, but I believe these risks are acceptable due to the long term reductions in risks through aquatic restoration in Alternative D.

Issue: Road Management. Alternative C proposed no new road construction while Alternative E proposed temporary road construction. Less mileages of road removal, reconstruction, and road relocation are gained from these alternatives to what is found in Alternative D. There is very little differentiation between the alternatives with regard to the access portion of this issue, except in the miles of temporary and permanent road construction. Temporary roads would be obliterated after use. All alternative preserves

access to recreational sites. All alternatives limited new road restrictions to roads where alternate local access exists or there were no other viable alternatives to mitigate the risks these roads pose to aquatic or wildlife resources. Open road densities for all alternatives are essentially the same. For all alternatives, the more roads that are fixed translates into more watershed improvements, which is a fundamental purpose of this project.

Issue: Activities within Old Growth. Alternative C treats approximately 300 acres of old growth and Alternative E does not treat old growth at all. Doing nothing with these stands, leaves the stands vulnerable to a possible stand-replacing fire. The dead and dying Douglas-fir are creating what is called "fuel ladders" that allow a fire to reach the canopy of larger trees such as the ponderosa pine. This will result in mortality of the larger ponderosa pine and the loss of a desired stand structure and ecological functioning. We have a limited amount of this dry-site old growth and I want to protect it. Alternative D appropriately treats 340 acres of old growth.

Issue: Fuel Loadings. Alternative C and E do not position us to be responsive to the high levels of fuels which will be created by the 1999 beetle flight. There are environmental and social consequences of not being positioned to respond rapidly. Once the value of the dying and dead trees is gone, there will be limited opportunity to remove these trees later due to excessive costs. The new hazardous fuels will fall to the ground, and in the event of wildfire, would contribute to undesirable effects, such as increased fire intensities, severity and soil impacts.

Alternative F
Please see attached summary and Chapter II of the FEIS for further description of Alternative F.

This alternative was not chosen because although it was a good alternative in terms of fuels treatment and hazard reduction, it does less than Alternative D for watershed and vegetation restoration. The alternative is costly and there is uncertainty of funding to do the work. This alternative foregoes much of the opportunity for vegetation restoration which will result in a loss of diversity of seral tree species and foregoes the opportunity to improve fisheries habitat.

Issue: Level of Timber Harvest. Nearly eight thousand fewer acres would be treated by this alternative than would be harvested and/or regenerated under Alternative D. Benefits foregone include fewer acres restored to seral tree species such as white pine, western larch, and ponderosa pine, and loss of opportunity to capture public value before it is lost.

Issue: Water Resources and Aquatic Habitat. Benefits foregone include a lost opportunity to treat roads which are contributing to impaired watershed function utilizing funds generated by dead and dying tree removal. Alternative F provides less opportunities to implement the many watershed restoration projects identified.

Issue: Road Management. There is very little differentiation between the alternatives with regard to the access portion of this issue, except in the miles of temporary and permanent road construction. Temporary roads would be obliterated after use. All alternative preserves access to recreational sites. All alternatives limited new road restrictions to roads where alternate local access exists or there were no other viable alternatives to mitigate the risks these roads pose to aquatic or wildlife resources. Open road densities for all alternatives are essentially the same. For all alternatives, the more roads that are fixed translates into more watershed improvements, which is a fundamental purpose of this project.

Issue: Activities within Old Growth. Alternative F treats 340 acres of old growth, as does Alternative D.

Issue: Fuel Loadings.
Clearly, a focus on fuels treatment in the wildland urban interface is important, but I believe this is best achieved in an integrated fashion with other resource needs as well. The additional and more intensive fuels treatments described in Alternative F are costly, and some beetle infested areas remain untreated. Improvements to multiple resources with this project is essential. A considerable amount of acres of infestation are treated in Alternative D that are not treated in Alternative F.

Alternative G
Please see attached summary and Chapter II of the FEIS for further description of Alternative G.

Alternative G proposes only restoration work that is feasible without commercial timber harvest. Some people had asked me to divert current timber sale funds to accomplish a restoration alternative instead of timber sales. I need to explain that I do not have the legal authority to change "Congressional intent" by adjusting funds between resource programs, so Alternative G could only be accomplished with additional appropriated dollars.

Over the past three years, the annual average allocation for the **entire** Idaho Panhandle National Forests for fuels reduction was approximately $400,000 and the yearly average for watershed restoration was approximately $300,000. The cost to implement Alternative G for these two Ranger Districts would be approximately $4.4 million. While we have asked for additional watershed restoration dollars for our highest priority watersheds in the past, we have received much less than needed. Theoretically, Alternative G could be implemented over a period of a decade or more, but that would require diverting funds from higher priority watershed restoration projects (e.g. bull trout habitat) throughout the Forest. By selecting Alternative D, I believe I can accomplish both my regular program and the activities identified in this project.

Another consideration is that recent Congressional budget direction has stated that the Forest Service should not burn up commercially viable wood material in prescribed fire treatments and that the public must be involved in these decisions. I believe it is Congressional intent that prescribed burning and killing commercially valuable trees should not be done before we consider if the trees could be harvested economically and that the broadscale application of Alternative G may not be consistent with this intent. We work hard to ensure that timber harvests are economical and are capable of funding many land management restoration activities. It doesn't make sense to commit to an alternative that would be difficult to fund with the current direction in Congress, particularly when other alternatives are feasible and all more fully achieve restoration objectives.

Issue: Level of Timber Harvest. While Alternative G best addresses the concerns of those who favor restoration without timber harvest, it falls far short of what overall restoration opportunities could be achieved by the combination of timber harvest, prescribed fire, and planting of desired species on a large scale. The desired forest composition and fuels reduction could only be achieved on 1481 acres using only prescribed fire and felling treatments and could only be accomplished through multiple treatments over several decades. Alternative G perpetuates an already serious problem of a less resilient species mix within infested forest stands which cannot be feasibly treated with this alternative.

Issue: Water Resources and Aquatic Habitat. This alternative would accomplish the largest amount of watershed restoration. As described above for the fuels treatments Alternative F, funding these improvements without utilizing the commercial value of dead trees would require a tenfold increase in appropriated watershed restoration funds. This is highly improbable and in the unlikely event that the funding became available, these project areas are not the highest priority watersheds on the Forest for aquatic restoration. By selecting Alternative D, I can continue my regular appropriated watershed restoration in higher priority watersheds throughout the Forest and accomplish the proposed restoration work in these beetle infested watersheds as well.

Issue: Road Management. No roads would be built or reconstructed in Alternative G for access needs. Impacts associated with new road construction would not occur. There is very little differentiation between the alternatives with regard to the access portion of this issue. All alternatives preserve access to recreational sites. All alternatives limited new road restrictions to roads where alternate local access exists or there were no other viable alternatives to mitigate the risks these roads pose to aquatic or wildlife resources. Open road densities for all alternatives are essentially the same.

Issue: Activities within Old Growth. Underburning would occur on approximately 200 acres of the dry-site ponderosa pine old growth. This is less than what would be achieved in Alternative D and does not take full advantage of opportunities to maintain this important component of the Forest.

Issue: Fuel Loadings. A much smaller percentage of the activity areas would receive fuels treatments; over 11,000 acres less would be treated for fuels reduction with this alternative.

FEATURES, MITIGATION AND MONITORING FOR DECISION

As noted earlier, this decision fully incorporates the design features, mitigation measures and monitoring presented in Chapter II of the FEIS, pages II-29 through 48, and pages 50 through 55, sections "Features Common to All Action Alternatives", "Mitigation Measures Common to the Coeur d'Alene River, Priest Lake and Newport Ranger District Project Areas" and "Monitoring". **I am fully satisfied that all practicable means to avoid or minimize environmental harm from the alternatives selected have been adopted.** For much further detail, please see the above pages of the FEIS and Appendix F of the FEIS (pages 1 through 23).

I have reviewed the OIG report recommendations regarding mitigation and monitoring. (Office of the Inspector General evaluation of the Forest Service Timber Sale Environmental Analysis Requirements, January of 1999.) I have directed my staff to develop a Monitoring Plan and Implementation Guide which will follow this Record of Decision. This workbook will list items that need to be incorporated into the timber sale contract, will certify that my decision in this Record becomes design criteria for the project and will provide the tracking mechanisms needed for project implementation.

A brief outline of the features are presented here.

Access Management: Specific mitigation measures are listed that assure management objectives are met, e.g. effectively closing roads in lynx habitat areas outside logging operations time periods.

Heritage: In the event that cultural resources are encountered during program activities, the Forest has the authority to modify or stop harvest activities. (Please see the paragraph below regarding heritage resources.)

Noxious Weeds: A variety of mitigation measures are included to prevent spread of noxious weeds.

Plants: A variety of mitigation measures to protect threatened, endangered and sensitive plants are included. (Please see the paragraph below regarding plants.)

Recreation: Disturbed trails will be restored. Specifically, the Canfield Trail System will be impacted and this facility will be fully restored.

Soils: Soil quality standards of the Forest Plan will be met; Chapter II lists design practices and their effectiveness.

Scenery: Specific mitigation measures that could be used to protect scenery resources are listed.

Watershed: Best Management Practices (BMPs) are the primary mechanism essential to achieving water quality standards. Chapter II Mitigation Measures and Appendix F of the FEIS includes the BMPs applicable to the IPNF portions of this project as well as the Soil and Water Conservation Practices Handbook.

Wildlife: There are specific mitigation measures designed to protect wildlife, e.g. wildlife tree and coarse woody debris retention, eagle, goshawk and flammulated owl nest protection, bat habitat protection, grizzly bear management, lynx management, big game protection, Coeur d'Alene salamander habitat protection, fisher security protection and ground nesting bird habitat protection. (Refer to Chapter II, Mitigation Measures and the Biological Assessments (BA) in the project file for more detail.)

Field Surveys

Sensitive Plants: Botanists' analysis assumed the presence of sensitive plant species in the unsurveyed, highly suitable habitat, and using vegetation information assigned the plant habitat into guilds. While a high number of acres have been found to contain highly suitable habitat, based on Forest experience from past surveys, only a very small percentage of habitat is ever actually occupied. These plants are rare, and even given the abundant presence of suitable habitat, most habitat is unoccupied. Mitigation is spelled out in Chapter II of the FEIS, pages 31, 32, 47-48 and includes surveys and protection of populations. No impacts to sensitive species or suitable habitat are expected in most habitat guilds. Impacts to sensitive moist, wet, cold, and dry forest guild species or habitats are minor, and will not cause a loss of population or species viability or lead to a trend towards federal listings. Based on these findings, no further information is needed to make my decision at this time. (In the exemption area, field surveys for sensitive plants will be completed by the end of June and are anticipated to be completed on all project areas by the first of August.)

Cultural Resources: There is a small percentage of the project area that has not been surveyed for heritage resources. Surveys will be done to locate and protect any cultural resource sites before ground disturbing activities begin, by redesigning units or other avoidance measures, and contract requirements will protect any sites found during activity. Again, my decision will not have an adverse impact on heritage resources. Proposed activities will be modified or dropped as necessary to protect any newly found heritage resources. Refer to Chapter II, pages 30 and 34 for a detailed discussion of required mitigation.

Past history on the IPNF shows that we have implemented other decisions to avoid adverse impacts in the same manner and have been successful in avoiding adverse impacts to important heritage resources.

Beetle Infestation: We have made our best scientifically based projections on where the beetle expansion will occur, and have included these anticipated expansion areas in the analysis as described throughout Chapter III of the FEIS. The acres, miles, and other amounts and mapped unit boundaries which are used to describe the alternative are approximations based on field review information and projected expansion of beetle-infested areas. Some changes may be expected during implementation.

As part of the ongoing review of my decision on the ground, continued monitoring of the beetle activity by the entomologists, silviculturists and foresters over the next two years will be done. If there are changed conditions, new or updated analyses will follow the direction for revision of environmental documents in the Forest Service Handbook (FSH 1909.15-92-1 Chapter 18, Correction, Supplementation, or Revision of Environmental Documents and Reconsideration of Decisions to Take Action).

LEGAL REQUIREMENTS

I have determined that implementation of the selected alternatives would be consistent with requirements of the following laws and regulations.

The Preservation of American Antiquities Act, June 1906
The National Historic Preservation Act of 1966, as amended in 1980 and 1992
Archeological Resources Protection Act of 1979
Native American Graves Protection and Repatriation Act of 1990
Religious Freedom Restoration Act, 1993
American Indian Religious Freedom Act, 1978 as amended in 1994

We consulted with the Kalispel Tribe of Indians and the Coeur d'Alene Tribe regarding this project; they were briefed on all aspects of the project. Representatives of the tribes brought up concerns and made suggestions which were incorporated into the project documentation. Their comments have been recorded and addressed. The existing cultural resources and known tribal interests would be protected in this project. Please see Chapter II and III, Heritage Resources and Tribal Interests in the FEIS and the project files for more detail.

The National Environmental Policy Act (NEPA), 1969
We have followed the direction in 40 CFR and Forest Service Handbook (FSH 1909.15) throughout development of this FEIS and project.

The Endangered Species Act, (ESA), 1973
Under provisions of this Act, federal agencies are directed to seek to conserve endangered and threatened species and to ensure that actions are not likely to jeopardize the continued existence of any of these species.

Results of Biological Assessment (see project file) state that on the Priest Lake Ranger District, the proposed project will have "no effect" on peregrine falcons, water howellia and Ute ladies'-tresses and "may affect, but is not likely to adversely affect" bald eagles, gray wolves, grizzly bears, woodland caribou, and bull trout and "is not likely to jeopardize the continued existence" of Canada lynx.

Results of Biological Assessment are that on the Coeur d'Alene River Ranger District, the proposed project will have "no effect" on peregrine falcons, water howellia and Ute ladies'-tresses and "may affect, but is not likely to adversely affect" bald eagles, gray wolves and bull trout and "is not likely to jeopardize the continued existence" of Canada lynx.

Results of the biological assessment were sent to US Fish and Wildlife Service who concurred with the findings on May 21, 1999 and therefore no formal consultation or preparation of the Biological Opinion is necessary. The US F&WS added the following comments in their letters of concurrence. "Should the Canada lynx be listed as either threatened or endangered, we concur that the proposed project "may affect, but is not likely to adversely affect" the Canada lynx, provided that you verify the environmental baseline and the action described in the BA have not changed. If there have been no changes we expect that this assessment and our concurrence will be sufficient for compliance under section 7, and no further consultation with the U.S. Fish and Wildlife Service (Service) regarding Canada lynx will be needed. Concurrence by the Service is contingent upon implementation of the conservation measures presented in the BA. "

Clean Air Act Amendments, 1977-1999

Clean Air Act - The Forest-wide standard for air quality is to coordinate all Forest Service management activities to meet the requirements of the State Implementation Plans, Smoke Management Plan and Federal air quality standards. This will be done under the selected alternatives, and burning will be conducted to maintain the air quality requirements This project is consistent with the Clean Air Act and state monitoring requirements. Refer to Chapter III of the FEIS.

The Clean Water Act, 1982

The Clean Water Act, as amended (33 USC 1323) directs the Forest Service to meet state, interstate and local substantive as well as procedural requirements respecting control and abatement of pollution in the same manner, and to the same extent as any nongovernment entity. The Forest Service has the statutory authority to regulate, permit and enforce land - use activities on the National Forest System lands that affect water quality. Appendix F of the FEIS establishes the connection between the Soil and Water Conservation Practices Handbook employed by the Forest Service and BMP's identified in Idaho Water Quality Standards (IDAPA 16.01.2300.05). It identifies how the Soil and Water Conservation Practice Standard Specifications for the Construction of Roads and the Timber Sale Contract provisions meet or exceed the rules and regulations pertaining to the Idaho Forest Practices Act, Title 38, Chapter 13, Idaho Code. The relevant portions of the rules and regulations developed under the Idaho Stream Protection Act are also covered. The design

features, mitigation measures and monitoring listed in Chapter II of the FEIS and Appendix F include project design to protect water quality. This section of the FEIS is fully incorporated in the Record of Decision. This project is consistent with the Clean Water Act.

The Idaho Panhandle Land and Resource Management Plan (Idaho Panhandle Forest Plan) 1987, as amended with the Inland Native Fish Strategy (INFS).

This project is consistent with the Idaho Panhandle National Forest Plan as amended by the INFS. The water/fisheries analysis conducted for the Douglas- fir Beetle Project and my decision to select the course of action as defined in this Record of Decision complies fully with the management direction and goals and objectives for the 1995 Inland Native Fish Strategy (INFS).

The National Forest Management Act, (NFMA), 1976 and Forest and Rangeland Renewable Resources Planning Act

The National Forest Management Act and accompanying regulations require that specific findings be documented at the project level. These findings are as follows:

Forest Plan Consistency
The National Forest Management Act (NFMA) and accompanying regulations require that "All resource plans...must be consistent with the Forest Plan" [16 U.S.C. 1604 (i)]. Management of lands in the Douglas- fir Beetle project area is guided by the Idaho Panhandle National Forest Land and Resource Management Plan (LRMP or Forest Plan), approved in 1987. Upon review of the information disclosed in the Douglas- fir Beetle FEIS, Chapter III effects analysis for each resource, I find that my decision is consistent with all Forest-wide and management area standards and guidelines. A summary of Forest Plan management direction is provided in Chapter II of the FEIS. Alternative D, in combination with Alternative A for Bumblebee and Steamboat watersheds is consistent with the Forest Plan as amended by the Inland Native Fish Strategy, (INFS). The selected alternatives are consistent with the Forest Plan land management allocations and with the standards and guidelines from the Forest Plan. (Refer to FEIS Chapter II and III for specific consistency findings by resource)

36 CFR 219.27 (a) Resource Protection
(1) The selected alternatives conserve soil and water resources and do not allow a significant or permanent impairment of the productivity of the land. (Refer to FEIS Chapter III, Watershed and Soil Productivity sections.)

(2) Activities will not affect most potentially serious natural hazards. The vegetative and fuels treatments will reduce the unwanted effects of catastrophic fire, should it occur, by reducing fuel concentrations. (Refer to FEIS Chapter III, Vegetation and Fuels sections.)

(3) The timber resource will be managed consistent with the Forest Plan objectives of minimizing hazards due to insects and disease by maintaining stand vigor and diversity of plant communities and tree species. (Refer to FEIS Chapter III, Vegetation section)

(4) Water bodies and their values are appropriately protected (Refer to FEIS Chapter III, Watershed section.)

(5) The selected alternatives will provide and maintain diversity of plant and animal communities (Refer to FEIS Chapter III, Vegetation and Wildlife sections.)

(6) The activities will either not affect or will maintain sufficient habitat for viable populations of existing native vertebrate species and management indicator species consistent with the multiple-use objectives established in the Forest Plan (Refer to FEIS Chapter III, Wildlife section and Biological Assessments and Evaluations in the project file.)

(7) The FEIS assesses potential physical, biological, aesthetic, cultural, engineering and financial impacts of the selected alternatives and consistency with multiple uses planned for the areas.

(8) Implementation of the selected alternatives will not affect critical habitat for threatened and endangered species (Please see above under Endangered Species Act).

(9) No right-of-way grants are being issued as part of these activities.

(10/11) The proposed road construction is designed according to standards appropriate to the planned uses, considering safety, costs of transportation and effects upon lands and resources (The entire Chapter III of the FEIS addresses effects from proposed roads in relation to each resource).

Based on the analysis provided in Chapter III of the FEIS, I have determined the necessity for the roads identified in the FEIS. I have also determined that the design standards are appropriate for the intended uses and that roads that were not deemed necessary for the permanent transportation system, will be reclaimed and vegetated following their use.

(12) Federal, State and local air quality laws, standards and regulations will be met (please see above under Clean Air Act)

36 CFR 219.27 (b) Vegetation Manipulation
(1) Be best suited to the goals stated in the Forest Plan. The Forest Plan allocated National Forest system lands in the project areas to eight different Management Areas. Goals for each management area are briefly described in Chapter I of the FEIS (I-8) and in detail in the IPNF Forest Plan. After review of the expected environmental consequences of the various alternatives (FEIS Chapter III) I believe the selected alternatives are well-

suited to initiate Idaho Panhandle National Forest Plan direction and meet the multiple-use goals established for the area.

(2) Assure that technology and knowledge exists to adequately restock lands within five years after final harvest. Technology and knowledge does exist to comply with this requirement. The IPNF have traditionally had high success rates for both artificial and natural regeneration. The soils and vegetation analysis is provided in Chapter III of the FEIS and in the project file documents this assurance.

(3) Not be chosen primarily because they will give the greatest dollar return or the greatest output of timber (although these factors shall be considered). Economic factors were considered in my decision, and the selected alternatives do have one of the highest economic values. However, they were chosen primarily for the reasons documented in this Record of Decision (i.e. meeting Forest Plan goals and responsiveness to key issues and public comment) and not because of economic value.

(4) Be chosen after considering potential effects on residual trees and adjacent stands. - The analysis considered the effects on residual trees and adjacent stands (Chapter III of the FEIS, Vegetation sections and Project File) and these were considered in my decision. I find the treatments in the selected alternative are designed to protect the reserve trees and adjacent stands, including riparian areas, to the extent possible;

(5) Be selected to avoid permanent impairment of site productivity and to ensure conservation of soil and water resources. The use of Best Management Practices (BMP's), avoidance of problem soil areas, regulation of yarding/site preparation operations, and the application of improvement and mitigation measures, as documented in Chapters II and III of the FEIS, will assure that site productivity is maintained and soil and water resources are protected;

(6) Be selected to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yields. After review of the FEIS, I find that the selected alternatives will provide the desired effects on water, fish, vegetation, scenery and other resources within the project area. It will also have acceptable effects on soil and wildlife resources within the project area, as discussed in Chapters II and III of the FEIS;

(7) Be practical in terms of transportation and harvesting requirements and total costs of preparation, logging and administration. Data presented in the FEIS and project file relative to transportation, economics, and harvesting requirements indicate to me that the selected alternative is feasible and practical.

36 CFR 219.27 (c) Silvicultural Practices
(1) No timber harvest, other than salvage sales or sales to protect other multiple-use values, shall occur on lands not suitable for timber production [16 U.S.C. 1604 (k)].

Guidelines for determining suitability are found in the Forest Plan, and proposed harvest units are within productive habitat types as described in the Forest Plan. Tree harvest will occur within Management Areas (MA) 1, 4, 6 ,16, and 19 as described in the Idaho Panhandle National Forests Plan. These MAs are considered suitable for timber management. Some activities also occur in MA 9 which is generally unscheduled for timber harvest. Inclusive in Management Area 9 are areas of lands of visual sensitivity, including the highly visual lands around Hayden Lake. These lands are generally unscheduled due to visual sensitivity, but are fully capable for timber growth and survival. Selected activities, including salvage, are appropriate to protect other values, such as fuels reduction in the wildland-urban interface.

36 CFR 219.27 (d) Even-aged Management
(1) The location and shape of openings that will be created by timber harvest included in the selected alternatives will achieve the desired combination of multiple-use objectives as described in the FEIS (Chapter III- Vegetation and Scenery sections).

(2) The openings that will be created shall be 40 acres or less unless approval is granted by the Regional Forester to exceed this size limit. However, as noted further on in the regulations (36 CFR219.27(d)(2)(iii)), this limit shall not apply to the size of areas harvested as a result of natural catastrophic condition such as fire, insect and disease attack, or windstorm. Due to the bark beetle situation, Regional Forester approval was not required for larger than 40 acre openings.

Some harvest unit openings could exceed 40 acres. For the Coeur d'Alene River Ranger District, there could be harvest unit openings 64 acres in size. For the Priest Lake Ranger District, there could be harvest unit openings 140 acres in size. Northern Regional Guides provide direction on how to proceed. It notes that where there is a natural catastrophic event, 40 acres may be exceeded without 60-day public review and Regional Forester approval provided that the public is notified in advance and the environmental analysis support the decision. The public was notified of the larger opening size via public scoping, formal meetings, media releases and the DEIS. The environmental analysis supports the decision; please see Chapter II, Alternative D and Chapter III of the FEIS.

Clearcutting and Even-aged Management
When timber is to be harvested using an even-aged management system, a determination that the system is appropriate to meet the objectives and requirements of the Forest Plan must be made. Where clearcutting is to be used, it must be determined to be the optimum harvest method [16 U.S.C. 1604(g)(3)(F)(i)].

As noted throughout this document and the FEIS, there is a Douglas-fir beetle outbreak that is killing Douglas-fir trees. The number of dead trees varies from a few scattered individuals to entire stands where most of the large Douglas-fir (preferred host) have been killed. Openings in the tree canopy will occur with or without harvesting due to the bark

beetle infestation. Please see Chapter III of the FEIS under Vegetation, Alternative A, for further information.

The selected Alternative D will employ the use of even-aged systems including seed tree, group selection and shelterwood. Descriptions of these systems for this project are include on page 2 of the attached Appendix A to this Record of Decision. All of these include reforestation. None of the timber harvest units will be clearcut.

Of the approximately 19,706 acres to be harvested with my decision, 5,230 acres will be harvested with even-aged management systems, and 14,476 acres will be harvested with selective harvest systems. Further Forest Plan direction (Appendix I, Vegetation Management Practices) for the specific habitat types identified for regeneration treatment indicates that even-aged treatments ranging from clearcutting to shelterwood cutting may be appropriate for these sites.

Regeneration harvest is proposed in stands where Douglas-fir beetle mortality, would result in openings that would encourage regeneration of more Douglas-fir and grand fir, not the desired long-lived seral species for the project areas. Long-lived seral species are desirable as they contribute to more resilient stand structures and ecological functioning. These seral species are important in the maintenance of other plant and animal species viability and will increase the resiliency of the forests to wildfire and future threats from beetles and other agents. The Douglas fir Beetle Project FEIS (Chapter III) and the silvicultural diagnosis (project file) disclose stand conditions, including age, species, stocking, growth, insects and diseases; ecological data, such as habitat types; and physical data such as topography and slope. Together, these provide the information necessary to make site-specific prescription determinations which are consistent with the Summary of Timber Information and Vegetation Management Practices (Forest Plan, APPENDIX A) and the Northern Regional Guide (USDA, Forest Service, 1983).

I have reviewed the silvicultural information in Douglas-fir Beetle FEIS and project record and the site-specific management objectives within the IPNF Forest Plan and have determined that even-aged management practices are appropriate (with reserve trees) as the appropriate method to achieve the multiple resource objectives on the sites selected for harvest.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

Regulations require that a record of decision specify the alternative or alternatives which were considered to be environmentally preferable (40 CFR 1505.2).

I believe that Alternative D provides the best balance of meeting multiple resource needs for all watersheds, and is the environmentally preferred alternative for all watersheds except Bumblebee and Steamboat. Alternative A, the No Action Alternative is the environmentally preferred alternative for the Steamboat and Bumblebee watersheds.

The other alternatives do not achieve as complete a job of integrating the full spectrum of resource benefits as is achieved by Alternative D throughout the project area.

EXEMPTION

The Idaho Panhandle National Forests has received permission from the Chief of the Forest Service to begin implementation of this project on 4,000 acres east of Hayden Lake. The "Exemption from Stay of Implementation" was granted due to emergency circumstances under CFR 36 section 215.10 (d). The Stay applies only to this portion of the project – an area where the beetle epidemic threatens forest stands on nearby state and private lands. The accumulation of dead fuels also present an extreme fire hazard in and adjacent to inhabited areas, which threatens public and firefighter safety as well as watershed health. To meet the intent of 40 CFR 1506.10(b)(2), contracts can not be awarded until thirty days after publication of the Notice of Availability of the FEIS in the Federal Register. Implementation could occur during the administrative review (appeal period) of the Record of Decision.

IMPLEMENTATION DATE AND APPEAL RIGHTS

Outside of the Exemption area, this project may not be implemented for at least 50 days from the date of legal notice of the decision appearing in the Spokesman-Review newspaper. I expect to implement this project (award timber sales) in the summer and fall of 1999. This period of time allows the public to consider the decision prior to implementation.

My decision is subject to appeal under 36 CFR 215.7. Appeals must be postmarked or received within 45 days of the date of legal notice in the Spokesman-Review newspaper and submitted to:

Appeal Deciding Officer, Regional Forester
USDA Forest Service, Northern Region
ATTN: 1570 APPEALS
200 East Broadway
P.O. Box 7669
Missoula, MT 59807

Any written notice of appeal of this decision must be fully consistent with 36 CFR 215.14 "Content of an Appeal", including the reasons for the appeal and how the decision fails to consider comments previously provided. It is the responsibility of those who appeal a decision to provide the Regional Forester sufficient written evidence and rationale to show why my decision should be changed or reversed. The written notice of appeal must:

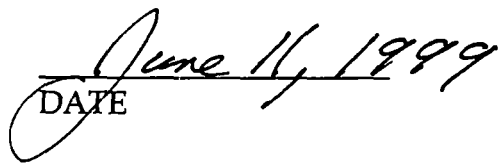
- State that the document is a Notice of Appeal filed pursuant to Title 36 CFR Part 215;
- List the name, address, and if possible, a telephone number of the appellant;
- Identify the decision document by title and subject, date of the decision, and name and title of the Responsible Official;
- Identify the specific change(s) in the decision that the appellant seeks or portion of the decision to which the appellant objects; and
- State how the decision fails to consider comments previously provided, either before or during the comment period specified in Title 36 CFR 215.6 and, if applicable, how the appellant believes the decision violates law, regulation, or policy.

Who to Contact

For further information on this project and implementation, contact Brad Gilbert, Operations Team Leader for the Idaho Panhandle National Forests at (208) 765-7233, or write to: Idaho Panhandle National Forests, 3815 Schreiber Way, Coeur d' Alene, Idaho, 83815.

Signature and Date

DAVID J. WRIGHT
Forest Supervisor
Deciding Official



DATE

APPENDIX A - SITE SPECIFIC ROAD AND UNIT INFORMATION

Coeur d'Alene River Ranger District Unit Information

Table A-1 Description of abbreviations, Coeur d'Alene River Ranger District Unit Information

Abbreviation	Description
r - Regeneration Harvest (or Harvest with Reforestation)	
GS	Group Selection
ST	Seed Tree
SW	Shelterwood
s - Selective Harvest	
IC	Improvement cut
SA	Salvage
TH	Thinning
ctwl	commercial thin of western larch
ctpp	commercial thin of ponderosa pine
C	Cable Logging System
H	Helicopter Logging System
S	Skyline Logging System
T	Tractor Logging System
GP	Grapple Pile Fuel Treatment
LS	Lop and Scatter Fuel Treatment
UB	Underburn Fuel Treatment
YT	Yard Tops Fuel Treatment
JP	Jackpot Burn Fuel Treatment

Table A-2 Unit Information, Coeur d'Alene River Ranger District.

Analysis Area Name	*Unit #*	*Acres*	*Harvest Prescription*	*Logging System*	*Fuel Treatment*
Hayden	2	11	s	S	YT
Hayden	3	42	s	S-H	YT
Hayden	4	19	r	H	UB
Hayden	5	21	s	S	YT
Hayden	6	78	s	S-H-T	LS
Hayden	7	29	s	S	YT
Hayden	8	19	s	S	YT
Hayden	9	65	s	T-S	YT
Hayden	10	10	s	H	LS
Hayden	11	17	s	H	LS
Hayden	12	20	s	S	YT
Hayden	13	73	s	H	LS
Hayden	14	83	s	H	LS
Hayden	15	5	s	H	LS
Hayden	16	13	r	H	UB
Hayden	17	9	s	H	LS
Hayden	18	15	r	S	UB
Hayden	20	21	s	H	LS
Hayden	21	22	r	S	UB

Analysis Area Name	Unit #	Acres	Harvest Prescription	Logging System	Fuel Treatment
Hayden	22	98	s	T-S-H	LS
Hayden	23	21	s	S	YT
Hayden	24	5	s	C	YT
Hayden	25	44	s	H	LS
Hayden	26	30	r	T-S	UB
Hayden	27	18	s	T-S	YT-LS
Hayden	28	15	r	T-S	JP
Hayden	29	22	r	T-S	UB
Hayden	31	288	s	T-S-H	LS
Hayden	32	13	s	H	LS
Cda	34	398	s	S-H	YT
Hayden	35	17	r	H	JP
Hayden	36	14	r	S	UB
Hayden	37	48	s	H	YT-LS
Hayden	38	493	s	S-H	LS-YT
Hayden	39	23	r	H	JP
Hayden	40	44	s	H	LS-YT
Cda	41	34	s	S	YT
Hayden	42	13	r	H	JP
Hayden	43	13	r	H	JP
Hayden	44	11	r	H	JP
Hayden	45	39	s	H	YT-LS
Cda	46	19	s	T-S	LS
Cda	47	16	s	S	LS
Cda	48	17	s	H	LS
Cda	50	93	s	H	LS-YT
Cda	51	18	s	S	LS
Cda	52	162	s	S-H	LS
Cda	53	45	s	H	YT
Cda	54	22	r	T-S	UB
Cda	55	55	s	H	LS
Cda	56	258	s	H	YT
Cda	57	328	s	H	YT-LS-UB
Steamboat	62	92	s	S-T-H	YT
Cda	63	15	s	H	LS
Hart	64	84	s	S-H	YT
Cda	65	396	s	T-S-H	YT-UB
Cda	66	46	s	H-T	YT-LS
Cda	67	15	s	T	LS
Cda	68	81	ctpp	H	UB
Cda	69	62	s	S-H	YT
Cda	70	14	s	S	YT
Cda	71	17	s	S	YT
Steamboat	72	4	s	H	YT
Steamboat	73	2	s	S	YT
Cda	74	18	s	S	LS
Cda	75	26	s	S	LS
Cda	76	31	s	T-S	LS
Cda	77	24	s	S	YT

Analysis Area Name	Unit #	Acres	Harvest Prescription	Logging System	Fuel Treatment
Hart	79	20	r	S	UB
Hart	80	22	s	S	YT
Hart	81	13	s	S	YT
Hart	82	41	s	S	YT
Hart	84	17	r	S	UB
Cda	85	31	s	T-S	LS
Hart	86	7	s	S	YT
Cda	87	24	s	H	LS
Cda	88	98	s	H	LS
Cda	90	17	s	T-S	LS
Cda	91	52	s	S	LS
Cda	92	70	s	T-S	LS
Cda	93	15	s	T	LS
Cda	94	85	s	T-S	LS
Cda	95	16	s	T	LS
Cda	96	38	s	T	LS
Beav	97	78	s	H	YT
Cda	98	102	s	T-S	LS
Bumblebee	99	19	r	S	UB
Bumblebee	100	64	r	S	UB
Beav	101	50	s	T-S	LS
Beav	102	11	r	S	UB
Beav	103	24	s	S	YT
Beav	105	20	s	S	LS
Beav	106	5	r	T-S	UB
Beav	107	50	s	T-S	YT
Beav	110	53	s	T-S	LS
Beav	111	4	r	T-S	UB
Beav	113	15	r	T-S	UB
Beav	114	18	r	H	UB
Beav	115	10	r	S	UB
Beav	116	7	r	S	UB
Beav	117	16	r	T-S	UB
Cda	119	25	s	H	LS
Cda	120	15	r	H-S	UB
Beav	121	26	r	H	UB
Beav	123	11	s	H	YT
Beav	124	65	s	S	YT
Beav	126	41	s	S	YT
Beav	127	12	r	S	UB
Beav	129	10	r	S	UB
Beav	130	22	r	S	UB
Beav	131	7	r	S	UB
Cda	133	38	s	T	LS
Cda	138	61	s	H	YT-LS
Chain	139	131	s	T-S-H	LS-YT
Chain	140	85	s	H	LS
Chain	141	29	r	H	UB
Cda	142	9	s	S-H	LS
Cda	143	96	s	H-S	LS

Analysis Area Name	Unit #	Acres	Harvest Prescription	Logging System	Fuel Treatment
Cda	145	84	s	S-H	LS
Cda	146	71	s	H	LS
Cda	147	69	s	H	LS
Cda	149	25	s	H	LS
Chain	151	57	s	S	LS
Chain	152	205	s	T-S-H	LS
Cda	153	66	s	H	LS
Chain	154	232	s	S-H	LS
Cda	155	208	s	T-H	LS
Cda	156	50	s	H	LS
Cda	157	80	s	T-S	YT
Chain	158	241	s	T-S-H	LS
Chain	159	33	r	T-S-H	UB
Chain	160	237	s	S-H	LS
Chain	161	161	s	S-H	LS
Cda	163	52	r	S-H	UB
Chain	164	49	r	H	UB
Chain	165	21	r	S	UB
Chain	166	118	s	S-H	LS
Chain	167	21	s	S	LS
Chain	168	14	r	H	UB
Hayden	170	69	s	T-H	LS
Hayden	171	48	r	S-H	UB
Hayden	172	44	r	T-S	UB
Hayden	173	17	s	T-H	LS
Hayden	174	11	s	T	YT
Cda	176	34	s	S-H	LS
Chain	177	28	r	H	UB
Cda	178	80	s	H	LS
Cda	179	38	s	S-H	LS
Cda	181	151	s	T-S-H	LS
Cda	182	33	s	S	LS
Chain	184	13	s	C	LS
Chain	185	128	s	T-S	LS
Chain	186	61	s	T-S	LS
Hayden	187	13	r	S	UB
Hayden	188	17	r	S	UB
Hayden	189	20	r	T-S	UB
Hayden	190	24	r	H	JP
Hayden	191	20	r	S	UB
Hayden	192	9	s	H	LS
Hayden	193	16	r	T-S	JP
Hayden	196	22	r	S	UB
Hayden	198	8	r	S	UB
Hayden	199	8	r	S	UB
Hayden	200	19	r	H	JP
Cda	203	20	s	T-S	YT
Cda	204	80	s	T-H	YT
Bumblebee	205	14	s	H	YT
Bumblebee	206	9	s	S	YT

Analysis Area Name	Unit #	Acres	Harvest Prescription	Logging System	Fuel Treatment
Cda	207	19	s	H	YT
Cda	208	8	s	S	LS
Cda	209	7	s	S	LS
Cda	210	59	ctwl	H	LS
Cda	211	20	ctwl	H	LS
Beav	212	28	s	T-S	YT
Beav	213	6	s	H	YT
Hayden	215	39	ctwl	T	LS
Hayden	216	14	s	S	YT
Hayden	217	6	ctwl	T-S	LS
Hayden	218	48	s	T-S	YT
Hayden	219	27	s	S	YT
Hayden	220	47	s	S	YT
Hayden	221	36	s	H	LS
Hayden	222	68	s	H	LS
Hayden	223	19	s	H	LS
Hayden	224	32	s	T-S-H	LS
Hayden	225	63	s	H	LS
Hayden	226	14	s	H	LS
Hayden	228	25	ctpp	H	UB
Hayden	229	11	r	H	UB
Hayden	230	207	s	T-H	LS-YT
Hayden	231	41	ctpp	H	UB
Hayden	232	31	s	T-S	YT
Hayden	233	18	s	T-S	YT
Hayden	234	120	s	S	YT
Hayden	235	43	s	T-S	LS
Hayden	236	30	ctpp	S	UB
Hayden	237	35	ctpp	T	UB
Hayden	238	18	ctpp	S	UB
Hayden	240	51	ctpp	H	UB
Hayden	241	37	ctwl	S-H	LS
Cda	242	26	r	H	UB
Cda	244	52	ctpp	S	UB
Cda	245	14	ctpp	S	UB
Cda	246	10	s	T-S	LS
Cda	247	20	ctpp	S	UB
Cda	252	42	ctpp	T-S	UB
Cda	253	9	ctpp	S	UB
Cda	254	21	s	S	YT
Cda	256	30	s	T	YT
Cda	263	29	ctwl	T-S	LS
Cda	264	120	ctwl	H	LS
Cda	265	45	ctwl	T-S	LS
Cda	266	37	ctpp	S	UB
Cda	267	10	s	H	LS
Cda	268	92	s	S-H	LS
Chain	269	26	s	H	LS
Chain	270	47	s	H	LS
Chain	271	85	s	H	LS-YT

Analysis Area Name	Unit #	Acres	Harvest Prescription	Logging System	Fuel Treatment
Chain	272	40	s	S	LS
Chain	273	43	ctpp	T-S	UB
Chain	274	35	ctpp	T-S	UB
Chain	275	33	s	T-S	LS
Chain	276	29	s	T-S	LS
Chain	277	12	r	T-S	UB
Cda	280	20	s	S	YT
Cda	281	40	s	S	LS
Cda	284	4	s	H	LS
Cda	287	26	ctpp	S	UB
Cda	288	17	ctpp	H	UB
Cda	289	31	ctpp	H	UB
Cda	290	23	ctpp	H	UB
Cda	291	41	ctwl	S-H	YT
Cda	293	14	s	S	YT
Cda	295	5	s	T-S-H	LS
Cda	296	12	s	S	YT
Cda	297	27	s	S	YT
Cda	298	8	s	S	YT
Cda	299	22	s	T-S	YT
Cda	300	7	s	S	YT
Cda	301	22	s	T	YT
Cda	302	10	ctpp	S	UB
Hayden	303	45	s	H	LS
Cda	304	17	s	S	YT
Cda	305	19	ctpp	S	UB
Hayden	306	11	ctwl	T	YT
Cda	308	52	ctwl	H	LS
Hayden	309	29	s	S	YT
Hayden	310	47	s	S	YT
Chain	311	7	s	T-S	LS
Chain	312	19	r	S-H	UB
Chain	313	68	s	H	LS
Chain	314	59	s	H	LS-YT
Hayden	315	43	ctwl	S	YT
Hayden	316	18	r	H	UB
Hayden	317	22	s	T-S	YT
Cda	318	12	s	T-S	LS
Chain	319	37	s	S	LS
Hayden	320	10	s	S	YT
Hayden	321	8	s	H	LS
Hayden	322	53	r	S	UB
Hayden	323	4	s	S	YT
Hayden	324	6	r	S	UB

Table A-3 Road Information, Coeur d'Alene River Ranger District.

Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Beauty	1575	2.5	Culvert Upgrades	Restoration
Beauty	1575C	1.4	Culvert Upgrades	Restoration
Beauty	1575J	0.4	Level 1 Obliteration	Restoration
Beauty	1597C	3.4	Heavy Reconstruction	Access
Beauty	1597G	0.4	Heavy Reconstruction	Access
Beauty	1597H-N	2.0	Level 2 Obliteration	Restoration
Beauty	438	6.2	Culvert Upgrades -	Restoration
			Light Reconstruction	
Beauty	438C	1.6	Level 1 Obliteration	Restoration
Beauty	438C-N	2.2	Level 1 Obliteration	Restoration
Beauty	453	6.2	Culvert Upgrades	Restoration
Beauty	453G	3.4	Level 1 Obliteration	Restoration
Beauty	453I	1.0	Level 1 Obliteration	Restoration
Beauty	453J	1.5	Level 1 Obliteration	Restoration
Beauty	453S	1.0	Level 1 Obliteration	Restoration
Beauty	439H	0.6	Level 1 Obliteration	Restoration
Beaver	6541	3.9	Culvert Upgrades -	Restoration
			Light Reconstruction	
Bumblebee	1521	1.7	Heavy Reconstruction	Access
Bumblebee	323	5.4	Culvert Upgrades	Restoration
Bumblebee	796	3.5	Level 2 Obliteration	Restoration
Carlin	439F	1.9	Level 1 Obliteration	Restoration
Cedar	359	0.1	Level 1 Obliteration	Restoration
Cedar	359	3.4	Culvert Upgrades -	Restoration
			Light Reconstruction	
Cedar	413N	4.6	Culvert Upgrades -	Restoration
			Light Reconstruction	
Cedar	1575	2.5	Culvert Upgrades	Restoration
Cedar	3016A	2.7	Light Reconstruction	Restoration
Chain Lakes	438N	5.3	Level 1 Obliteration	Restoration
Chain Lakes	614N	6.0	Level 1 Obliteration	
Chain Lakes	1578	5.8	Level 1 Obliteration	Restoration
Chain Lakes	1578	0.2	Level 2 Obliteration	Restoration
Chain Lakes	1578N-2T	0.2	Heavy Reconstruction	Access
Chain Lakes	1578 NS	4.6	Level 1 Obliteration	Restoration
Chain Lakes	1540B	3.7	Culvert Upgrades -	Restoration
			Light Reconstruction	
Chain Lakes	1542	8.8	Level 1 Obliteration	Restoration
Chain Lakes	1542A-NS	0.6	Level 1 Obliteration	Restoration
Chain Lakes	1545	2.0	Light Reconstruction	Restoration
Chain Lakes	539	7.5	Culvert Upgrades	Restoration
Coeur d'Alene	1575	2.5	Culvert Upgrades	Restoration
Fernan	108-PO	0.3	Level 2 Obliteration	Restoration
Fernan	1559UI	3.5	Build 400' of trail / Remove 1 crossing	Restoration
Fernan	1562	1.5	Level 2 Obliteration	Restoration
Fernan	1593-N	4.8	Level 1 Obliteration	Restoration

Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Fernan	1593AUB	1.7	Level 1 Obliteration	Restoration
Fernan	1535	1.7	Culvert Upgrades	Restoration
Fernan	1593N	1.2	Culvert Upgrades	Restoration
Fernan	1593-UAN	1.0	Level 1 Obliteration	Restoration
Fernan	2337B	1.2	Level 1 Obliteration	Restoration
Fernan	2339	1.8	Level 1 Obliteration	Restoration
Fernan	2339A/Spur	4.7	Level 1 Obliteration	Restoration
Hart	990	6.8	Level 1 Obliteration	Restoration
Hart	Hopkins	0.5	Level 2 Obliteration	Restoration
Hayden	1526	1.0	Road Relocation	Restoration
Hayden	1526	1.0	Level 2 Obliteration	Restoration
Hayden	1526N	3.8	Level 1 Obliteration	Restoration
Hayden	1526UG	4.8	Level 2 Obliteration	Restoration
Hayden	1526UV	1.3	Level 2 Obliteration	Restoration
Hayden	1526UZ	0.4	Level 1 Obliteration	Restoration
Hayden	1528	2.8	Level 2 Obliteration	Restoration
Hayden	1530	4.0	Light Reconstruction	Restoration
Hayden	1535	8.0	Culvert Upgrades	Restoration
Hayden	1535-UF	1.3	Level 1 Obliteration	Restoration
Hayden	1535-UH	1.0	Level 1 Obliteration	Restoration
Hayden	1536	2.3	Heavy Reconstruction	Access
Hayden	1536	2.3	Culvert Upgrades	Access
Hayden	1562B	1.0	Heavy Reconstruction	Access
Hayden	206	12.6	Culvert Upgrades	Restoration
Hayden	206-PO	1.1	Heavy Reconstruction	Access
Hayden	206UA-PO	1.1	Heavy Reconstruction	Access
Hayden	3090.11-PO	1.5	Level 2 Obliteration	Restoration
Hayden	437	7.9	Culvert Upgrades -	Restoration
			Light Reconstruction	
Hayden	437.12	1.7	Level 1 Obliteration	Restoration
Hayden	437N	1.3	Level 2 Obliteration	Restoration
Hayden	437-PO	0.2	Level 2 Obliteration	Restoration
Hayden	437-UK	0.25	Level 1 Obliteration	Restoration
Hayden	625	2.2	Level 2 Obliteration	Restoration
Hayden	625.12	0.2	Level 2 Obliteration	Restoration
Hayden	625.13	0.8	Level 2 Obliteration	Restoration
Hayden	625N	2.4	Level 1 Obliteration	Restoration
Hayden	1552		Culvert Upgrades	Restoration
Scott	961	1.8	Level 2 Obliteration	Restoration
Steamboat	1537A	7.4	Culvert Upgrades	Restoration
Steamboat	1547	1.4	Level 1 Obliteration	Restoration
Steamboat	257	7.8	Light Reconstruction	Restoration
Steamboat	257-UA, UC, UH	2.6	Level 1 Obliteration	Restoration
Wolf Lodge	1510	1.7	Level 1 Obliteration	Restoration
Wolf Lodge	1510A	1.8	Level 1 Obliteration	Restoration
Wolf Lodge	1575	2.5	Culvert Upgrades	Restoration
Wolf Lodge	1581UE	2.7	Level 1 Obliteration	Restoration
Wolf Lodge	1581UE	2.7	Culvert Upgrades	Restoration
Wolf Lodge	1581UG	0.5	Level 1 Obliteration	Restoration

Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Wolf Lodge	202	9.2	Culvert Upgrades	Restoration
Wolf Lodge	6702	7.1	Culvert Upgrades	Restoration
Wolf Lodge	814	2.2	Level 1 Obliteration	Restoration
Wolf Lodge	814A	3.0	Level 1 Obliteration	Restoration
Wolf Lodge	6849, 6849D, 6849E	5.6	Level 1 Obliteration	Restoration

Table A-4 Priest Lake Unit Information

Map Analysis Area Name	Unit No.	Acres	Harvest Prescription D	Fuels Treatment D	Logging System D
Bismark Mtn.	bn01	34	Seed Tree	Underburn	Skyline
Bismark Mtn.	bn01a	13	Seed Tree	Lop and Scatter	Skyline
Bismark Mtn.	bn02	11	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bn03	29	Salvage	Lop/Scatter-Yard Tops	Skyline - Helicopter
Bismark Mtn.	bn05	32	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bn06	56	Shelterwood	Underburn	Helicopter
Bismark Mtn.	bn07	121	Group Selection	Underburn	Helicopter
Bismark Mtn.	bn08	16	Salvage	Grapple Pile	Tractor
Bismark Mtn.	bn09	33	Salvage	Grapple Pile	Tractor
Bismark Mtn.	bn09a	55	Salvage	Yard Tops-Lop/Scatter	Helicopter - Skyline
Bismark Mtn.	bn10	22	Seed Tree	Underburn	Tractor - Helicopter
Bismark Mtn.	bn11	34	Seed Tree	Underburn	Helicopter
Bismark Mtn.	bn12	27	Salvage	Yard Tops-Lop/Scatter	Helicopter
Bismark Mtn.	bn13	59	Salvage	Lop/Scatter-Grapple Pile	Tractor
Bismark Mtn.	bn14	10	Seed Tree	Underburn	Skyline
Bismark Mtn.	bn14a	7	Salvage	Lop/Scatter-Grapple Pile	Tractor
Bismark Mtn.	bn15	2	Salvage	Lop and Scatter	Tractor
Bismark Mtn.	bn16	34	Salvage	Lop and Scatter	Helicopter - Skyline
Bismark Mtn.	bn16a	20	Group Selection	Lop and Scatter	Helicopter
Bismark Mtn.	bn17	12	Salvage	Lop/Scatter-Grapple Pile	Tractor
Bismark Mtn.	bn19	61	Shelterwood	Underburn-Grapple Pile	Tractor
Bismark Mtn.	bn19a	91	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bn20a	185	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bn21	4	Shelterwood	Lop and Scatter	Helicopter
Bismark Mtn.	bs01	45	Shelterwood	Underburn	Skyline - Helicopter
Bismark Mtn.	bs02	20	Seed Tree	Underburn	Skyline
Bismark Mtn.	bs03	26	Shelterwood	Underburn	Tractor
Bismark Mtn.	bs05	42	Seed Tree	Underburn	Helicopter
Bismark Mtn.	bs05a	140	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bs05b	221	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bs06	3	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	bs07	3	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f01	15	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f02	35	Salvage	Lop and Scatter	Tractor - Skyline
L.W.Branch	f02a	40	Shelterwood	Underburn	Helicopter
U.W.Branch	f02b	3	Salvage	Lop and Scatter	Skyline
U.W.Branch	f03	36	Shelterwood	Underburn	Helicopter
U.W.Branch	f03a	30	Salvage	Lop and Scatter	Skyline
L.W.Branch	f06	54	Shelterwood	Underburn	Tractor - Skyline
L.W.Branch	f06a	13	Group Selection	Underburn	Helicopter
L.W.Branch	f06b	7	Group Selection	Underburn	Skyline - Tractor
L.W.Branch	f07	22	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f07a	14	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f07b	18	Salvage	Underburn	Helicopter
L.W.Branch	f08	3	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f08a	24	Salvage	Lop and Scatter	Skyline
L.W.Branch	f09	2	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f09a	38	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f10	74	Improvement Cut	Underburn	Helicopter
L.W.Branch	f12	4	Salvage	Lop and Scatter	Skyline
L.W.Branch	f12a	4	Salvage	Lop and Scatter	Skyline
L.W.Branch	f13	6	Improvement Cut	Underburn	Skyline

Table A-4 Priest Lake Unit Information

Map Analysis Area Name	Unit No.	Acres	Harvest Prescription D	Fuels Treatment D	Logging System D
L.W.Branch	f13a	10	Improvement Cut	Underburn	Skyline
L.W.Branch	f14	1	Salvage	Lop and Scatter	Tractor
L.W.Branch	f14a	12	Salvage	Lop and Scatter	Tractor
L.W.Branch	f16a	27	Salvage	Lop and Scatter	Skyline
L.W.Branch	f17a	4	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f18	23	Shelterwood	Underburn	Skyline
L.W.Branch	f18a	12	Improvement Cut	Lop and Scatter	Tractor
L.W.Branch	f19	9	Shelterwood	Underburn	Skyline
L.W.Branch	f19a	20	Salvage	Lop and Scatter	Tractor
L.W.Branch	f20	4	Salvage	Grapple Pile	Tractor
L.W.Branch	f22	5	Salvage	Lop and Scatter	Tractor
L.W.Branch	f23	7	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f24	7	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f24a	3	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f24b	6	Salvage	Lop and Scatter	Helicopter
L.W.Branch	f25	27	Salvage	Lop and Scatter	Skyline
L.W.Branch	f25a	17	Salvage	Lop and Scatter	Skyline
L.W.Branch	f25b	8	Salvage	Lop and Scatter	Skyline
L.W.Branch	f26	2	Shelterwood	Grapple Pile	Tractor
L.W.Branch	f28	1	Shelterwood	Underburn	Skyline
L.W.Branch	f28a	10	Shelterwood	Underburn	Skyline
L.W.Branch	f29	1	Salvage	Lop and Scatter	Tractor
L.W.Branch	f29a	30	Shelterwood	Underburn	Tractor
L.W.Branch	f30	0	Salvage	Lop and Scatter	Skyline
L.W.Branch	f30a	18	Shelterwood	Underburn	Helicopter
L.W.Branch	m01	6	Shelterwood	Underburn	Skyline
L.W.Branch	m02	3	Salvage	Lop and Scatter	Tractor
L.W.Branch	m03	19	Improvement Cut	Underburn	Skyline - Tractor
L.W.Branch	m04	21	Improvement Cut	Underburn	Tractor
L.W.Branch	m05	29	Improvement Cut	Underburn	Skyline
L.W.Branch	m06	49	Shelterwood	Underburn	Tractor
L.W.Branch	m07	122	Improvement Cut	Underburn	Skyline
L.W.Branch	m08	59	Improvement Cut	Underburn	Helicopter
L.W.Branch	m09	20	Shelterwood	Underburn	Skyline
L.W.Branch	m10	38	Shelterwood	Underburn	Tractor - Skyline
L.W.Branch	m11	8	Shelterwood	Underburn	Skyline
L.W.Branch	m12	13	Shelterwood	Underburn	Tractor
L.W.Branch	m13	29	Shelterwood	Underburn	Skyline
L.W.Branch	m14	8	Shelterwood	Grapple Pile	Tractor
L.W.Branch	m15	16	Shelterwood	Grapple Pile	Tractor
L.W.Branch	m16	16	Salvage	Lop and Scatter	Tractor
L.W.Branch	m17	17	Salvage	Lop and Scatter	Skyline
L.W.Branch	m18	5	Salvage	Lop and Scatter	Tractor
L.W.Branch	m19	10	Shelterwood	Grapple Pile	Tractor
L.W.Branch	m20	23	Salvage	Lop and Scatter	Tractor
L.W.Branch	m21	9	Salvage	Grapple Pile	Tractor
L.W.Branch	m22	3	Salvage	Lop and Scatter	Tractor
L.W.Branch	m23	10	Salvage	Lop and Scatter	Tractor
L.W.Branch	m24	36	Improvement Cut	Underburn	Helicopter
L.W.Branch	m25	38	Shelterwood	Grapple Pile-Underburn	Tractor
U.W.Branch	m26	25	Group Selection	Grapple Pile	Tractor
U.W.Branch	m27	11	Salvage	Lop and Scatter	Tractor

Table A-4 Priest Lake Unit Information

Map Analysis Area Name	Unit No.	Acres	Harvest Prescription D	Fuels Treatment D	Logging System D
U.W.Branch	m28	12	Group Selection	Grapple Pile	Tractor
L.W.Branch	m29	61	Group Selection	Lop and Scatter	Skyline
L.W.Branch	m30	7	Shelterwood	Underburn	Skyline
L.W.Branch	m31	29	Salvage	Lop and Scatter	Skyline
L.W.Branch	m32	5	Salvage	Lop and Scatter	Skyline
L.W.Branch	m33	22	Improvement Cut	Underburn	Skyline
L.W.Branch	o01	13	Shelterwood	Underburn	Skyline - Tractor
L.W.Branch	o01a	7	Salvage	Lop and Scatter	Skyline
L.W.Branch	o04	2	Salvage	Lop and Scatter	Skyline
L.W.Branch	o04a	8	Salvage	Lop and Scatter	Skyline
L.W.Branch	o05	3	Salvage	Lop and Scatter	Skyline
L.W.Branch	o05a	22	Salvage	Lop and Scatter	Skyline
L.W.Branch	o06	1	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o06a	3	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o07	2	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o08	2	Salvage	Lop and Scatter	Skyline
L.W.Branch	o08a	20	Salvage	Lop and Scatter	Skyline
L.W.Branch	o08b	19	Salvage	Lop and Scatter	Skyline
L.W.Branch	o09	2	Salvage	Lop and Scatter	Skyline
L.W.Branch	o09a	19	Salvage	Lop and Scatter	Skyline
L.W.Branch	o10	1	Salvage	Lop and Scatter	Skyline
L.W.Branch	o10a	13	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o12	19	Shelterwood	Underburn	Skyline
L.W.Branch	o12a	9	Salvage	Lop and Scatter	Skyline
L.W.Branch	o14	13	Shelterwood	Underburn	Helicopter
L.W.Branch	o14a	4	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o15	5	Shelterwood	Grapple Pile	Tractor
L.W.Branch	o15a	16	Salvage	Lop and Scatter	Tractor - Skyline
L.W.Branch	o16	4	Seed Tree	Underburn	Skyline
L.W.Branch	o16a	19	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o18	33	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o19	9	Shelterwood	Underburn	Skyline
L.W.Branch	o20	31	Group Selection	Yard Tops	Helicopter
L.W.Branch	o21	4	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o22	4	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o22a	8	Salvage	Lop and Scatter	Helicopter
L.W.Branch	o25	3	Salvage	Grapple Pile	Tractor
L.W.Branch	o26	11	Salvage	Lop and Scatter	Skyline
L.W.Branch	o27	30	Shelterwood	Underburn	Skyline
L.W.Branch	o28	16	Group Selection	Yard Tops	Skyline
L.W.Branch	o29	7	Shelterwood	Underburn	Skyline
L.W.Branch	o30	13	Shelterwood	Underburn	Skyline
L.W.Branch	o31	7	Shelterwood	Underburn	Skyline
L.W.Branch	o32	7	Shelterwood	Underburn	Skyline
L.W.Branch	o33	29	Shelterwood	Underburn	Helicopter
L.W.Branch	o34	16	Salvage	Lop/Scatter-Yard Tops	Helicopter
L.W.Branch	o35	4	Salvage	Lop/Scatter-Yard Tops	Helicopter
L.W.Branch	o36	76	Shelterwood	Underburn	Helicopter
L.W.Branch	o37	8	Shelterwood	Underburn	Skyline
L.W.Branch	o38	4	Salvage	Lop and Scatter	Skyline
L.W.Branch	o39	14	Salvage	Lop and Scatter	Skyline
L.W.Branch	o40	3	Salvage	Lop and Scatter	Helicopter

Table A-4 Priest Lake Unit Information

Map Analysis Area Name	Unit No.	Acres	Harvest Prescription D	Fuels Treatment D	Logging System D
L.W.Branch	o41	1	Salvage	Lop and Scatter	Tractor
L.W.Branch	o42	5	Salvage	Lop and Scatter	Skyline
L.W.Branch	o46	2	Salvage	Lop and Scatter	Skyline
U.W.Branch	p01	26	Seed Tree	Underburn	Skyline
U.W.Branch	p02	30	Seed Tree	Underburn	Helicopter
U.W.Branch	p02a	31	Salvage	Lop and Scatter	Skyline
U.W.Branch	p03	7	Seed Tree	Underburn	Helicopter
U.W.Branch	p04	41	Seed Tree	Underburn	Skyline
U.W.Branch	p05	42	Group Selection	Lop/Scatter-Grapple Pile	Skyline
U.W.Branch	p06	26	Seed Tree	Underburn	Skyline
U.W.Branch	p06a	51	Seed Tree	Underburn	Skyline
U.W.Branch	p07	18	Salvage	Lop and Scatter	Skyline
U.W.Branch	p08	8	Shelterwood	Lop and Scatter	Tractor
U.W.Branch	p10	11	Shelterwood	Underburn	Helicopter
U.W.Branch	p11	23	Shelterwood	Underburn	Helicopter
U.W.Branch	p11a	22	Salvage	Underburn	Helicopter - Skyline
U.W.Branch	p12	5	Seed Tree	Grapple Pile	Tractor
U.W.Branch	p12a	25	Seed Tree	Underburn	Tractor - Skyline
U.W.Branch	p13	16	Salvage	Lop and Scatter	Tractor
U.W.Branch	p14	20	Seed Tree	Underburn	Skyline
U.W.Branch	p14a	34	Seed Tree	Underburn	Skyline
U.W.Branch	p15	20	Seed Tree	Underburn	Tractor - Skyline
U.W.Branch	p15a	16	Seed Tree	Underburn	Skyline
U.W.Branch	p16	11	Seed Tree	Underburn	Helicopter
U.W.Branch	p16a	10	Seed Tree	Underburn	Helicopter
U.W.Branch	p17	23	Seed Tree	Underburn	Skyline
U.W.Branch	p18	5	Salvage	Yard Tops	Tractor
U.W.Branch	p18a	7	Salvage	Lop and Scatter	Skyline
U.W.Branch	p19	8	Salvage	Yard Tops	Skyline
U.W.Branch	p20	60	Shelterwood	Underburn	Skyline
U.W.Branch	p20a	22	Salvage	Lop/Scatter-Yard Tops	Skyline
U.W.Branch	p21	17	Salvage	Lop and Scatter	Skyline
U.W.Branch	p22	29	Salvage	Lop and Scatter	Skyline
U.W.Branch	p25	23	Seed Tree	Underburn	Skyline
U.W.Branch	p25a	10	Salvage	Lop and Scatter	Skyline
U.W.Branch	p25b	58	Shelterwood	Underburn	Skyline
U.W.Branch	p29	5	Salvage	Lop and Scatter	Skyline
U.W.Branch	p30	9	Shelterwood	Underburn	Skyline
U.W.Branch	p31	9	Salvage	Lop and Scatter	Tractor
U.W.Branch	p32	5	Salvage	Lop and Scatter	Skyline
Quartz	q01	58	Improvement Cut	Underburn	Skyline
Quartz	q02	49	Improvement Cut	Underburn	Skyline
Quartz	q02a	59	Salvage	Lop and Scatter	Helicopter
Quartz	q03	192	Salvage	Lop and Scatter	Skyline - Tractor
Quartz	q03c	27	Salvage	Lop and Scatter	Skyline
Quartz	q04	65	Shelterwood	Underburn	Helicopter
L.W.Branch	q05	39	Shelterwood	Underburn	Skyline - Helicopter
L.W.Branch	q06	36	Shelterwood	Underburn	Helicopter
Quartz	q07	37	Improvement Cut	Underburn	Helicopter
L.W.Branch	q08	22	Salvage	Lop and Scatter	Skyline
L.W.Branch	q09	31	Seed Tree	Underburn	Helicopter
L.W.Branch	q10	17	Shelterwood	Underburn	Tractor

Table A-4 Priest Lake Unit Information

Map Analysis Area Name	Unit No.	Acres	Harvest Prescription D	Fuels Treatment D	Logging System D
L.W.Branch	q11	35	Seed Tree	Underburn	Tractor - Helicopter
Quartz	q12	107	Shelterwood	Underburn	Skyline
Quartz	q13	60	Shelterwood	Lop and Scatter	Skyline
L.W.Branch	q14	6	Salvage	Lop and Scatter	Tractor
L.W.Branch	q16	89	Improvement Cut	Underburn	Skyline
L.W.Branch	q17	3	Improvement Cut	Grapple Pile	Tractor
Quartz	q18	52	Seed Tree	Underburn	Helicopter
Quartz	q19	13	alvage Improvement Cu	Lop and Scatter	Skyline - Tractor
Quartz	q19a	43	Salvage	Lop and Scatter	Skyline
Quartz	q20	19	Salvage	Lop and Scatter	Skyline
Quartz	q20a	46	Salvage	Lop and Scatter	Helicopter
L.W.Branch	q21	4	alvageImprovement Cu	Lop and Scatter	Skyline
Quartz	q22	43	alvageImprovement Cu	Lop and Scatter	Helicopter
L.W.Branch	q24	8	Improvement Cut	Grapple Pile	Skyline
L.W.Branch	q25	17	Shelterwood	Underburn	Tractor
Quartz	q26	119	Shelterwood	Grapple Pile	Skyline - Tractor
L.W.Branch	q27	20	Shelterwood	Underburn	Tractor
L.W.Branch	q28	20	Improvement Cut	Lop and Scatter	Helicopter
L.W.Branch	q35	19	Improvement Cut	Grapple Pile	Tractor
L.W.Branch	q36	21	Improvement Cut	Grapple Pile	Helicopter
U.W.Branch	t01	23	Salvage	Grapple Pile	Tractor - Skyline
U.W.Branch	t02	29	Shelterwood	Underburn	Skyline
U.W.Branch	t02b	14	Shelterwood	Underburn	Skyline
U.W.Branch	t02c	33	Shelterwood	Underburn	Skyline
U.W.Branch	t03	25	Shelterwood	Underburn	Skyline
U.W.Branch	t03a	49	Shelterwood	Underburn	Skyline
U.W.Branch	t04	27	Shelterwood	Underburn	Skylne
U.W.Branch	t04a	21	Shelterwood	Underburn	Skyline
U.W.Branch	t05	141	Shelterwood	Grapple Pile-Underburn	Tractor - Skyline
U.W.Branch	t06	10	Shelterwood	Underburn	Skyline
U.W.Branch	t07	10	Salvage	rapple Pile-Lop and Scat	Skyline
U.W.Branch	t08	81	Shelterwood	Underburn	Skyline
U.W.Branch	t09	8	Shelterwood	Underburn	Helicopter
U.W.Branch	t10	74	Shelterwood	Underburn	Skyline
Bismark Mtn.	t11	6	Salvage	Lop and Scatter	Helicopter
Bismark Mtn.	t12	13	Shelterwood	Lop and Scatter	Skyline
Bismark Mtn.	t13	8	Shelterwood	Lop and Scatter	Helicopter
Bismark Mtn.	t14	120	Shelterwood	Underburn	Skyline
U.W.Branch	t15	27	Shelterwood	Underburn	Skyline
U.W.Branch	t15a	4	Shelterwood	Underburn	Helicopter
U.W.Branch	t15b	24	Improvement Cut	Underburn	Skyline
U.W.Branch	t16	19	Shelterwood	Grapple Pile	Skyline
Bismark Mtn.	t17	29	Shelterwood	Underburn	Skyline
U.W.Branch	t18	41	Shelterwood	Lop and Scatter	Skyline
U.W.Branch	t19	5	Shelterwood	Underburn	Skyline
U.W.Branch	t20	5	Shelterwood	Underburn	Skyline
U.W.Branch	t21	9	Shelterwood	Underburn	Skyline
U.W.Branch	t22	4	Shelterwood	Underburn	Skyline
Bismark Mtn.	t23	18	Salvage	Grapple Pile	Tractor
U.W.Branch	t24	5	Shelterwood	Underburn	Skyline
U.W.Branch	t25	29	Salvage	Lop and Scatter	Skyline - Tractor
U.W.Branch	t26	8	Improvement Cut	Underburn	Helicopter

Table A-4 Priest Lake Unit Information

Map Analysis Area Name	Unit No.	Acres	Harvest Prescription D	Fuels Treatment D	Logging System D
G.Watson	**w01**	22	Shelterwood	Underburn	Helicopter
G.Watson	**w01a**	13	Shelterwood	Underburn	Helicopter
G.Watson	**w02**	17	Shelterwood	Underburn	Helicopter - Tractor
G.Watson	**w02a**	20	Shelterwood	Underburn	Helicopter - Tractor
G.Watson	**w03**	63	Group Selection	Yard Tops	Helicopter
G.Watson	**w04**	116	Group Selection	Yard Tops	Helicopter - Tractor
G.Watson	**w05**	36	Salvage	Lop and Scatter	Skyline
G.Watson	**w06**	64	Shelterwood	Underburn	Helicopter
G.Watson	**w07**	8	Shelterwood	Underburn	Tractor
G.Watson	**w07a**	34	Shelterwood	Underburn	Tractor
G.Watson	**w08**	29	Shelterwood	Underburn	Tractor - Skyline
G.Watson	**w09**	43	Shelterwood	Grapple Pile	Helicopter
G.Watson	**w10**	31	Shelterwood	Underburn	Helicopter
G.Watson	**w11**	19	Shelterwood	Underburn	Helicopter
G.Watson	**w12**	19	Shelterwood	Underburn	Helicopter
G.Watson	**w13**	23	Salvage	Lop and Scatter	Skyline
G.Watson	**w15**	60	Group Selection	Lop and Scatter	Helicopter
G.Watson	**w16**	42	Group Selection	Lop and Scatter	Helicopter
G.Watson	**w17**	9	Group Selection	Yard Tops	Helicopter
G.Watson	**w18**	1	Salvage	Lop and Scatter	Helicopter
G.Watson	**w18a**	15	Salvage	Lop and Scatter	Helicopter
G.Watson	**w18b**	15	Salvage	Lop and Scatter	Helicopter
G.Watson	**w18c**	59	Seed Tree	Underburn	Helicopter
G.Watson	**w18d**	10	Shelterwood	Underburn	Helicopter
G.Watson	**w19**	6	Seed Tree	Underburn	Helicopter
G.Watson	**w19a**	9	Seed Tree	Underburn	Helicopter
G.Watson	**w22**	3	Salvage	Lop and Scatter	Helicopter
G.Watson	**w22a**	55	Salvage	Lop and Scatter	Helicopter
G.Watson	**w23**	39	Salvage	Lop and Scatter	Helicopter

Table A-4 Priest Lake Road Information

Map Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Lower W. Branch	1041	2.4	Heavy Reconstruction	Restoration
Lower W. Branch	1041	< 0.1	Heavy Reconstruction	Restoration
Lower W. Branch	1041	0.1	Heavy Reconstruction	Restoration
Lower W. Branch	1042	1.3	Maintenance	Access
Lower W. Branch	1042a	1.7	Level 1 Obliteration	Restoration
Upper W. Branch	1075	6.5	Maintenance	Access
Upper W. Branch	1075a	1.1	Light Reconstruction	Access
Upper W. Branch	1075b	0.6	Level 1 Obliteration	Restoration
Upper W. Branch	1075b	2.1	Level 1 Obliteration	Restoration
Upper W. Branch	1075c	1.4	Level 1 Obliteration	Restoration
Upper W. Branch	1075c	0.5	Level 1 Obliteration	Restoration
Upper W. Branch	1075d	0.6	Level 1 Obliteration	Restoration
Upper W. Branch	1075d	0.3	Level 1 Obliteration	Restoration
Upper W. Branch	1075f	< 0.1	Level 1 Obliteration	Restoration
Upper W. Branch	1075f	1.8	Level 1 Obliteration	Restoration
Upper W. Branch	1075j	1.1	Light Reconstruction	Restoration
Upper W. Branch	1075k	0.5	Level 1 Obliteration	Restoration
Upper W. Branch	1075l	1.0	Light Reconstruction	Restoration
Upper W. Branch	1075m	0.8	Light Reconstruction	Restoration
Upper W. Branch	1075n	2.4	Light Reconstruction	Restoration
Upper W. Branch	1081	1.0	Level 1 Obliteration	Restoration
Lower W. Branch	1084	0.5	Light Reconstruction	Restoration
Upper W. Branch	1089a	1.2	Light Reconstruction	Restoration
Lower W. Branch	1092d	0.1	Light Reconstruction	Restoration
Lower W. Branch	1092L	0.9	Level 1 Obliteration	Restoration
Lower W. Branch	1092L	0.2	Level 1 Obliteration	Restoration
Lower W. Branch	1092q	0.4	Level 1 Obliteration	Restoration
Upper W. Branch	1094	0.4	Maintenance	Access
Upper W. Branch	1094a	0.5	Level 1 Obliteration	Restoration
Upper W. Branch	1094b	2.2	Light Reconstruction	Restoration
Upper W. Branch	1094b spur	0.7	Level 1 Obliteration	Restoration
Upper W. Branch	1094b spur	0.6	Level 1 Obliteration	Restoration
Upper W. Branch	1094d	0.3	Level 1 Obliteration	Restoration

Table A-4 Priest Lake Road Information

Map Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Lower W. Branch	1095	5.5	Light Reconstruction	Restoration
Lower W. Branch	1095a	0.2	Level 1 Obliteration	Restoration
Lower W. Branch	1095a	1.1	Level 1 Obliteration	Restoration
Lower W. Branch	1095b	0.1	Level 1 Obliteration	Restoration
Lower W. Branch	1095b	0.1	Level 1 Obliteration	Restoration
Lower W. Branch	1095b	1.6	Level 1 Obliteration	Restoration
Lower W. Branch	1095spur	2.2	Level 1 Obliteration	Restoration
Lower W. Branch	1096a	0.3	Level 1 Obliteration	Restoration
Lower W. Branch	1098	8.2	Light Reconstruction	Access
Lower W. Branch	1098	< 0.1	Light Reconstruction	Access
Upper W. Branch	1108 segment1	1.6	Level 2 Obliteration	Restoration
Upper W. Branch	1108 segment2	0.7	Level 1 Obliteration	Restoration
Upper W. Branch	1108 segment2	2.8	Level 1 Obliteration	Restoration
Upper W. Branch	1108 segment2	0.8	Level 1 Obliteration	Restoration
Upper W. Branch	1108 segment3	0.8	Maintenance	Access
Upper W. Branch	1108b	1.0	Level 1 Obliteration	Restoration
Upper W. Branch	1108b	0.2	Level 1 Obliteration	Restoration
Lower W. Branch	1109	0.3	Maintenance	Access
Lower W. Branch	1115	2.1	Light Reconstruction	Restoration
Lower W. Branch	1142	8.7	Heavy Reconstruction	Restoration
Quartz	1300f	2.1	Light Reconstruction	Restoration
Upper W. Branch	1308a	0.3	Level 1 Obliteration	Restoration
Binarch-Lamb	1308e spurs	0.1	Level 1 Obliteration	Restoration
Upper W. Branch	1308e spurs	0.2	Level 1 Obliteration	Restoration
Upper W. Branch	1308f	0.6	Level 1 Obliteration	Restoration
Upper W. Branch	1308f	0.1	Level 1 Obliteration	Restoration
Upper W. Branch	1308g	0.4	Level 1 Obliteration	Restoration
Lower W. Branch	1312	2.2	Maintenance	Access
Lower W. Branch	1312jeep	1.3	Level 1 Obliteration	Restoration
Lower W. Branch	1314	0.2	Light Reconstruction	Restoration
Quartz	1314C/stacked	1.1	Level 1 Obliteration	Restoration
Lower W. Branch	1314F	1.7	Heavy Reconstruction	Restoration
Lower W. Branch	1332f	0.7	Level 1 Obliteration	Restoration

Table A-4 Priest Lake Road Information

Map Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Quartz	1334maze	1.2	Level 1 Obliteration	Restoration
Quartz	1334maze	4.5	Level 1 Obliteration	Restoration
Lower W. Branch	1335	2.7	Light Reconstruction	Restoration
Quartz	1335	0.6	Light Reconstruction	Restoration
Quartz	1335	< 0.1	Light Reconstruction	Restoration
Quartz	1335	< 0.1	Light Reconstruction	Restoration
Lower W. Branch	1335A	0.9	Heavy Reconstruction	Restoration
Lower W. Branch	1335C	0.9	Level 1 Obliteration	Restoration
Upper W. Branch	1336a	0.6	Level 1 Obliteration	Restoration
Upper W. Branch	1336a	< 0.1	Level 1 Obliteration	Restoration
Upper W. Branch	1336maze	1.1	Level 1 Obliteration	Restoration
Lakeface Granite	1340	2.2	Level 1 Obliteration	Restoration
Lakeface Granite	1340	0.1	Heavy Reconstruction	Restoration
Lakeface Granite	1340a	1.3	Level 1 Obliteration	Restoration
Lakeface Granite	1347	0.1	Heavy Reconstruction	Restoration
Lakeface Granite	1347a	2.2	Level 1 Obliteration	Restoration
Lower W. Branch	1906a	0.8	Level 1 Obliteration	Restoration
Upper W. Branch	1906a	0.1	Level 1 Obliteration	Restoration
Lower W. Branch	2117	0.3	Light Reconstruction	Restoration
Lower W. Branch	2117	2.4	Light Reconstruction	Restoration
Lower W. Branch	2117	0.1	Light Reconstruction	Restoration
Lower W. Branch	2121	3.0	Light Reconstruction	Restoration
Lower W. Branch	2232	0.9	Light Reconstruction	Access
Lower W. Branch	2232A	0.7	Light Reconstruction	Access
Lakeface Granite	2245 network	2.1	Level 1 Obliteration	Restoration
Lakeface Granite	2249	2.5	Maintenance	Restoration
Lakeface Granite	2249	1.1	Level 1 Obliteration	Restoration
Lakeface Granite	2249a	1.3	Level 1 Obliteration	Restoration
Lakeface Granite	2249a	0.6	Level 1 Obliteration	Restoration
Lower W. Branch	2250	2.0	Light Reconstruction	Access
Lower W. Branch	2250	< 0.1	Light Reconstruction	Access
Lower W. Branch	2250a	1.6	Level 1 Obliteration	Restoration
Lower W. Branch	2250a	0.1	Level 1 Obliteration	Restoration

Table A-4 Priest Lake Road Information

Map Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Lower W. Branch	2250b	0.3	Level 1 Obliteration	Restoration
Lower W. Branch	2291a	0.3	Level 1 Obliteration	Restoration
Lower W. Branch	2291a	1.1	Level 1 Obliteration	Restoration
Lower W. Branch	2291f	1.1	Level 1 Obliteration	Access
Lower W. Branch	2291g	1.7	Level 1 Obliteration	Restoration
Lower W. Branch	2291j	0.7	Level 1 Obliteration	Restoration
Lower W. Branch	2291l	0.1	Level 1 Obliteration	Restoration
Upper W. Branch	2292	1.8	Light Reconstruction	Restoration
Upper W. Branch	2292a	0.8	Level 1 Obliteration	Restoration
Upper W. Branch	2292c end seg	0.5	Level 1 Obliteration	Restoration
Upper W. Branch	2292e	1.7	Light Reconstruction	Restoration
Upper W. Branch	2292e spur	0.4	Level 1 Obliteration	Restoration
Binarch-Lamb	2423	0.2	Level 1 Obliteration	Restoration
Binarch-Lamb	2423	3.3	Level 1 Obliteration	Restoration
Upper W. Branch	2730a	0.6	Level 1 Obliteration	Restoration
Lower W. Branch	305.2 spur	0.4	Level 1 Obliteration	Restoration
Binarch-Lamb	310	0.5	Level 1 Obliteration	Restoration
Upper W. Branch	312	0.4	Road Relocation	Restoration
Binarch-Lamb	313	1.2	Level 1 Obliteration	Restoration
Binarch-Lamb	313	1.3	Light Reconstruction	Restoration
Lower W. Branch	318	5.9	Light Reconstruction	Restoration
Lower W. Branch	318a	0.3	Maintenance	Access
Lower W. Branch	318f	2.8	Level 1 Obliteration	Restoration
Lower W. Branch	318j	3.2	Heavy Reconstruction	Restoration
Upper W. Branch	333	1.7	Level 1 Obliteration	Restoration
Upper W. Branch	333	1.3	Level 1 Obliteration	Restoration
Upper W. Branch	333	2.7	Light Reconstruction	Restoration
Upper W. Branch	333b	0.1	Light Reconstruction	Restoration
Upper W. Branch	333b	0.3	Light Reconstruction	Restoration
Upper W. Branch	333b	3.5	Light Reconstruction	Restoration
Upper W. Branch	333g	1.2	Level 1 Obliteration	Restoration
Quartz	334	0.5	Erosion Control	Restoration
Upper W. Branch	336	1.9	Level 1 Obliteration	Restoration

Table A-4 Priest Lake Road Information

Map Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Upper W. Branch	336	1.0	Level 1 Obliteration	Restoration
Upper W. Branch	336	< 0.1	Level 1 Obliteration	Restoration
Upper W. Branch	336	0.3	Level 1 Obliteration	Restoration
Upper W. Branch	336	0.3	Level 1 Obliteration	Restoration
Upper W. Branch	336	< 0.1	Level 1 Obliteration	Restoration
Upper W. Branch	336	0.8	Level 1 Obliteration	Restoration
Upper W. Branch	336c	< 0.1	Level 1 Obliteration	Restoration
Upper W. Branch	336c	1.1	Level 1 Obliteration	Restoration
Upper W. Branch	336d	3.3	Level 1 Obliteration	Restoration
Upper W. Branch	336d	0.2	Level 1 Obliteration	Restoration
Upper W. Branch	336e	1.0	Level 1 Obliteration	Restoration
Upper W. Branch	336e	0.8	Level 1 Obliteration	Restoration
Upper W. Branch	336e	0.3	Level 1 Obliteration	Restoration
Upper W. Branch	336h	4.7	Level 1 Obliteration	Restoration
Quartz	416	0.6	Erosion Control	Restoration
Quartz	416	0.5	Road Relocation	Restoration
Upper W. Branch	461d	0.6	Level 1 Obliteration	Restoration
Lower W. Branch	462	0.8	Level 1 Obliteration	Restoration
Lower W. Branch	462	1.6	Level 1 Obliteration	Restoration
Lower W. Branch	462a	0.4	Level 1 Obliteration	Restoration
Lower W. Branch	462a	2.9	Level 1 Obliteration	Restoration
Lower W. Branch	462a	0.3	Level 1 Obliteration	Restoration
Lower W. Branch	462c	1.2	Light Reconstruction	Access
Lower W. Branch	462c	< 0.1	Light Reconstruction	Access
Lakeface Granite	638	1.4	Light Reconstruction	Restoration
Binarch-Lamb	639	1.5	Level 1 Obliteration	Restoration
Binarch-Lamb	639	0.3	Heavy Reconstruction	Restoration
Binarch-Lamb	639	0.3	Heavy Reconstruction	Restoration
Binarch-Lamb	639b	1.9	Level 1 Obliteration	Restoration
Binarch-Lamb	639c	0.1	Maintenance	Access
Binarch-Lamb	639c	3.1	Maintenance	Access
PLSW094	639c	< 0.1	Maintenance	Access
Upper W. Branch	659a	0.2	Light Reconstruction	Restoration

Table A-4 Priest Lake Road Information

Map Analysis Area Name	Road Number	Miles	Road Work Prescription	Primary Objective
Upper W. Branch	659a	3.2	Light Reconstruction	Restoration

SUMMARY

AVAILABILITY OF THE FEIS AND RECORD OF DECISION

There are two separate Records of Decision (ROD), one for the Idaho Panhandle and one for the Colville National Forests. This Summary has been published with each of these RODs for your convenience. If you'd like further information, copies of the complete Final Environmental Impact Statement (FEIS) (Four volumes totalling over 1200 pages) may be obtained by contacting the Idaho Panhandle National Forests Office, 3815 Schreiber Way, Coeur d'Alene, Idaho 83815, 208-765-7223 and the Newport Ranger District, 315 N. Warren Ave, Newport, Washington 99156, 509-447-7300 or downloaded from the web site at www.fs.fed.us/ipnf/dfbugs.

Introduction

The next 47 pages are a summary of the Final Environmental Impact Statement for the Douglas-fir Beetle Project within the Idaho Panhandle and Colville National Forests in the States of Idaho and Washington. The Final EIS is essentially a management plan to address specific resource needs in these geographic areas. This summary provides a **brief** overview of the Douglas-fir Beetle Project. All resources described in detail in Chapter III are only briefly presented in this document. There is much greater detail in the Final EIS.

The following sections are included:

- *Changes Between Draft and Final EIS*
- *Background of Project*
- *Project Area*
- *Purpose and Need*
- *Proposed Action*
- *Scoping*
- *Alternative Development*
- *Key Issues*
- *Alternative Descriptions*
- *Comparison of Effects of the Alternatives*

CHANGES BETWEEN DRAFT AND FINAL EIS

A number of changes were completed between the DEIS and FEIS in response to public comments. To examine our response to comment, please see Appendix A of the FEIS which includes both public comment and Forest Service responses.

- **Modification of alternatives, including the proposed action:** All alternatives had some changes based on field verification and further analysis. For example, units on suitable habitat for some sensitive species were dropped, fuel treatments were modified in response to soil productivity concerns, the amount of road rehabilitation was increased and design criteria and mitigation measures were added based on consultation with the USDI Fish and Wildlife Service.

- **All action alternatives are now consistent with Forest Plan standards with two exceptions:** for the Coeur d'Alene River Ranger District, under Alternatives B, D and E, the Bumblebee drainage does not meet water quality standards because there are no restoration opportunities within the beetle-infested areas to offset the increased risk of installing culverts on an existing road or a temporary road spur. For the Newport District, Alternative G may not meet cover/forage ratios in several prescribed burn units within winter range.

- **Permanent road construction in Alternative D** (Coeur d'Alene River Ranger District) was reduced from about 21 miles to about 5 miles. One mile of these roads would be new construction to allow the obliteration of a segment of road 1526 which is encroaching on a stream channel.

- **Development and evaluation for alternatives not previously given detailed consideration by the agency:** A new Alternative G was developed and is included in Chapter II and III. Alternative F was expanded to include Priest Lake and Newport Ranger Districts.

- **Supplementation, improvement, or modification of the analyses:** Chapter III analysis has been modified to respond to public comments including more site-specific discussion, additional analysis in numerous areas (fire/fuel, air quality, watershed, finances, soils productivity, heritage and tribal interests). Appendix D for the FEIS was added; this includes road and unit numbers that enable the reader to better track individual activities.

- **Correction of errors.** During the comment period, an errata sheet was mailed to the mailing list to correct errors in the Draft Summary and elsewhere. These and other errors pointed out during the review period have been corrected in the FEIS.

- **Explanation of why further agency response is not warranted.** Issues outside the scope of the purpose and need or issues about agency policy that are outside the scope have been identified in the Response to Comments section, Appendix A of the FEIS.

BACKGROUND OF PROJECT

Snow, ice and wind during the winter of 1996-97 damaged trees in North Idaho and northeastern Washington. These damaged and down trees provided the preferred

breeding environment for the Douglas-fir bark beetles and a tremendous number of eggs were laid during the summer of 1997. Douglas-fir beetles infest and kill Douglas-fir trees. Where susceptible trees are abundant, such as these down and damaged trees, beetle populations can build up rapidly and spread to adjacent green, standing trees. The effects and extent of this outbreak were exacerbated by unusually hot and dry summer weather during 1998. During that summer, extensive beetle damage was being found on current timber sales. A special aerial photography flight was conducted by the Forest Service Regional Forest Health Protection staff in cooperation with the Colville and Idaho Panhandle National Forests in September, 1998. The flight showed infestations across a wide area which affected both Forests. The Forests then decided to collaborate on public involvement and studies (Outbreak Incident Report) to evaluate the true extent and possible expansion of the outbreak.

Forest entomologists are saying that this outbreak could be the largest noted in the area for the last 40 years. The number of dead trees varies from a few scattered individuals to entire stands where most of the large Douglas-fir (preferred host) have been killed. The death of these large trees is leading to high levels of fuel accumulation, and natural regeneration of more short-lived early seral tree species (Douglas-fir and grand fir) which are already overly abundant compared to historical conditions.

Large Scale Ecosystem Setting

Based on recent findings presented in the Interior Columbia Basin Ecosystem Management Project, disturbances such as those related to insect and fire mortality have played an important role in determining forest composition throughout the Interior Columbia Basin. Forested ecosystems have become more susceptible to severe fires and outbreaks of insects and diseases. In addition, findings for the river basins on the two forests show that the river basins have a low composite ecological integrity primarily due to past alterations. The large scale assessment identified risks to ecological integrity from severe stand-replacing fire potential, risks to aquatic and hydrologic integrity due to high road densities, and risks to terrestrial species due to habitat degradation.

The Northern Region Assessment describes changes in vegetation that are contributing to the current beetle infestation. "In northern Idaho and moist portions of western Montana, Douglas-fir was largely an early succession species that regenerated well after wildfire in various mixes with white pine and larch, but then was largely eliminated by root diseases and bark beetles after 100-140 years, giving way to pine and larch. In the absence of white pine and larch, we have experienced an increase in Douglas-fir during early succession, and an apparent increase in root disease levels as succession proceeds. When Douglas-fir is killed out of stands now, the end result is an effective 50-150 year acceleration of succession to grand fir and hemlock. This condition with heavy root disease and ladder fuels promotes and increases risk of stand-replacement fire...The most significant societal and ecological risk is associated with fires; particularly where ladder fuels exist or are developing near or adjacent to urban interface locations. " (Northern Region Overview; USDA October 1998. pg 22 & 24). Regarding aquatic resources, this assessment notes that

aquatic restoration should be focused on specific needs based on the zone aquatic restoration strategy. (Northern Region Overview Summary, USDA April 1999, pg 9).

Geographic Assessments
Subsequent studies specific to the Coeur d'Alene, Priest Lake and Newport Ranger Districts are very similar to the more broad-scale conclusions found at the Columbia Basin and Northern Region scales. Historically, the vegetation composition was dominated by species such as ponderosa pine, western larch and western white pine. These long-lived tree species were typically established after some form of disturbance and they have the potential to occupy a site for two to three hundred years. With the loss of much of the white pine due to the blister rust pathogen, effective reduction in wildfires due to wildfire suppression, and land management activities such as selective logging; the character of the forest has changed. The forests are now dominated by species which are shorter-lived, more shade tolerant and are more vulnerable to disturbances such as insects, diseases and fires. Species that are much more abundant now than they were historically include Douglas-fir, grand fir and western hemlock.

The six-step process outlined in the "Ecosystem Analysis at the Watershed Scale" was followed for analysis areas below the Geographic Assessment scale for this EIS. This watershed scale analysis does further analysis to identify current and reference conditions, to identify key issues, to synthesize and interpret analyses results, and to develop recommendations.

Outbreak Incident Assessment Team Report
At the IPNF Supervisor's office, a team was assigned to complete a large scale analysis of current conditions of the Idaho Panhandle National Forests and part of the Newport District on the Colville National Forest (Outbreak Incident Report). The team assessed two things: 1) how many acres of stands are there that would provide good habitat for the Douglas-fir bark beetle (based on a hazard rating system), and 2) which watersheds currently have high levels of the bark beetle infestations in them (risk areas). The team identified nine risk areas. They were then assigned priorities based on vegetative restoration, aquatic restoration, amount of urban interface and risk to TES species. These areas are within the Coeur d'Alene River, Priest Lake and Newport Ranger Districts. The analysis areas for the nine risk areas include approximately 460,000 acres; in some cases these nine risk areas have been divided further for analysis purposes. These analysis areas include entire watersheds where the beetle is known to have infested timber stands **and** where risks to other ecosystem components are present.

Fuels and Fire Risk
Present day forest structure has changed to various degrees from its historic stand structure in part due to effective fire exclusion, accidentally introduced white pine blister rust, and past logging. Since the late 1930s, fire control efforts have become more effective. The primary impact of fire control has been to eliminate underburns and mixed severity fires

which served as the thinning agents that favored larch and ponderosa pine. Much of the early day logging selectively harvested western white pine and ponderosa pine.

The balance between fire and natural decomposition of dead wood in these forests has been disrupted. A current danger is from fuel accumulations so high that burns are extremely hot, resulting in wildfire that could be unsafe for fire fighters and that could destroy most of the trees, known as a stand-replacing fire. The effectiveness of fire prevention and suppression has permitted increased ground fuel accumulations and stratified fuels (both living and dead) to the point where many fires can not be contained or confined. They now burn hotter and more extensively, on the average, than even 10 years ago. (Harvey, 1984)

More people now live in urban and rural settings adjacent to or within areas of wildland vegetation that historically experienced frequent non-lethal and mixed severity fires. These areas are now more prone to lethal stand-replacing fires (ICBEMP, USDA, USDI 1996.)

PROJECT AREA

The area covered by this project analysis is illustrated in the Vicinity Map located within the attached Record of Decision. In general, it is described as National Forest Systems Lands scattered within Kootenai county, Shoshone county and the western area of Bonner County, in Idaho. In Washington state it includes National Forest System Lands in the eastern portion of Pend Oreille County (part of the Priest Lake Ranger District) and the eastern portion of Pend Oreille county bounded on the south and west by the Pend Oreille River, south of Browns Lake, and adjacent to the Idaho Panhandle National Forests (part of the Newport Ranger District).

Nine areas have been analyzed--six on the Coeur d'Alene River Ranger District (Kootenai and Shoshone Counties), two on the Priest Lake Ranger District (Bonner County, Idaho and Pend Oreille County, Washington), and one on the Newport Ranger District (Pend Oreille County, Idaho). These analysis areas include watersheds where the beetle is known to have infested timber stands and where risks to other ecosystem components are present.

These analysis areas and their watersheds are as follows.

On the Coeur d'Alene Ranger District;
- Hayden Analysis Area
- Coeur d'Alene Lake Analysis Area (Fernan, Wolf Lodge, Nettleton, Fourth of July, Cedar Creek, Beauty Creek, Carlin Creek, and other watersheds)
- Chain Lakes Analysis Area
- Steamboat Analysis Area
- Bumblebee Analysis Area and
- Hart Analysis Area (Hart Creek and Beaver Creek watersheds).

On the Priest Lake Ranger District:
- Lakeface-Granite Analysis Area and
- Lower Priest Analysis Area (Binarch-Lamb area watersheds, Upper West Branch area watersheds, Lower West Branch area watersheds, and Quartz area watersheds).

On the Newport Ranger District:
- Newport Analysis Area (Pend Oreille Face, Browns Lake, Skookum, Indian Creek, Bead Lake and Marshall subwatersheds).

PURPOSE AND NEED

The purpose of this project is to respond to the Douglas-fir beetle outbreak by restoring vegetation and aquatic ecosystems utilizing timber harvest and the recovered value to accomplish the restoration objectives. Funds would be used to plant ponderosa pine, western larch and blister rust-resistant western white pine, improve drainage structures on roads, close unneeded road segments, reconstruct roads, relocate roads, and remove hazardous fuels.

The need for the proposed action is generated by the difference between current and projected conditions in the project areas and the desired conditions for resources.

Fisheries and Wildlife Habitat

Current Condition: In many of the watersheds where the beetle infestations are occurring, existing roads are affecting fish habitat and wildlife security. Shifts away from channel stability in streams, caused by roads and other management activities, have resulted in a changed structure and function of stream ecosystems and a decline in many native fish populations. In some areas, roads on the landscape have compromised wildlife security.

Desired Condition: Watershed systems are maintained or improved to promote dynamic equilibrium within their stream systems. Stream and water quality are maintained and fully support beneficial uses of the water. Road densities are reduced and wildlife habitat security is improved.

Forest Fuels

Current Condition: Because of effective wildfire suppressions since the 1930s and the broadscale change in species composition of the forest, high fuel levels have been building for the last several decades. Many Douglas-fir trees are dead and dying, and understories with large components of Douglas-fir are providing ladder fuels (forest fuels, normally green foliage, arranged in a vertical pattern that enable a ground fire to climb into the tree crowns). The large trees now dying from the beetle attack are adding to these fuel levels. This is especially of concern in areas where private lands are close to National Forest. Due

to the number of snags, a wildfire could be unsafe for fire fighters and it could be so intense it could be very difficult to control. The result could destroy most of the trees -- a stand-replacing fire, and possibly destroy private property. These high intensity wildfires could also have severe consequences to other vegetation, soils, stream networks and the visual quality of landscapes.

Desired Condition: Fuel loadings are reduced to levels where cost-effective resource protection is possible should a wildfire start. The reductions in fuel loadings also preserve short term options in stands that are important for wildlife habitat.

Vegetation

Current Condition: Our forests are now made up of almost twice as much Douglas-fir as what was historically present. This is part of a broadscale reduction in species that are potentially long-lived under local climatic regimes (white pine, ponderosa pine, and western larch), and their replacement by either early seral species that tend to be shorter-lived under local climatic regimes (Douglas-fir and lodgepole pine), or late seral species (grand fir and western hemlock) that can be highly stressed by the periodic droughts that are part of normal local climatic variation. These species shifts are due to decades of fire exclusion, white pine blister rust, and past logging practices. The change in composition of tree species, especially in older forests, has also affected wildlife habitat and the species that depend on it.

Desired Condition: Some infested stands are trending toward late and old structure through thinning, and as beetle mortality increases, stands lost to beetle kill are regenerated to long-lived seral species such as ponderosa pine, larch and western white pine. Stands that have moved toward historic vegetation composition are better suited to adapt to disturbance.

Social Values

Current Condition: Trees killed by the Douglas-fir beetle will lose a portion of their value as sawtimber each year they remain unharvested. Based on a review of research completed for this EIS (Projected Deterioration of Beetle-killed Douglas-fir on the Idaho Panhandle National Forests, David Evans and Associates, January, 1999), there are cases where trees killed by Douglas-fir beetles and subsequently infected with decay fungus were not usable as lumber two years after infection. By harvesting infested trees as quickly as possible (before the economic value is lost), we can provide for the greatest opportunities for long-term restoration within the affected areas, while providing economic benefits to local communities.

Desired Condition: There are benefits to the public from reduction of fuel hazards and reduced risks to watersheds. Salvage of wood fiber from beetle killed trees provides jobs

and income to local communities. Ecosystem elements are sustainable and trending toward historic conditions as a result of watershed restoration activities financed by tree harvest.

PROPOSED ACTION

The proposed action is noted as Alternative B throughout this document and the FEIS. The intent of the proposed action is to provide a balanced approach implementing vegetation, aquatic restoration and fuels reduction in the nine risk areas identified in the Outbreak Incident Assessment Report (USDA Forest Service, November 1998).

Proposed activities include:

Aquatic, Watershed and Wildlife Restoration
Erosion control
Road reconstruction (light and heavy) including culvert replacement, repairs or removal
Relocation of roads encroaching on stream channels
Obliteration of roads that are unneeded or not needed in the near future

Fuels treatment
Prescribed burn
Pile and burn
Mechanical treatments (yarding of tops to landings for burning, lopping & scattering tops and limbs)

Vegetation treatment
Selective harvesting (selective removal & improvement harvesting)
Regeneration harvesting (group selection, shelterwood & seed tree)
Planting of long-lived seral species such as ponderosa pine, larch & western white pine
Noxious weed prevention or treatment
Temporary road building and road reconstruction for harvest access with obliteration after use

For more details, please see later descriptions of Alternative B and Tables S-1, 2, & 3.

SCOPING

The scoping process is an early and open process for determining the scope of issues to be addressed for a particular management proposal. It includes both internal Forest Service, other agency and public participation. Public outreach was a cooperative effort between the two Forests, the State of Idaho Department of Lands and the University of Idaho Cooperative Extension Service. Private, state and national forest lands are all being affected by the outbreak. To detect the extent of the beetle outbreak, aerial flights, population surveys and field reconnaissance was conducted in September-October 1998. Subsequently, in November 1998, the Outbreak Incident Assessment Report was

completed; this was done by an interdisciplinary team with extensive experience in the NEPA process, local conditions and issues.

A news release was published in regional newspapers in the last week of October and first week of November, 1998. Two Notices of Intent to prepare an EIS were published in the Federal Register on November 17, 1998. Formal scoping letters and the quarterly reports identifying the Coeur d'Alene, Pend Oreille and Priest Beetle Projects were sent to hundreds of people. In late November, the legal scoping notice and an informative advertisement was placed in area newspapers, notifying the public of the outbreak and inviting comments. Three open house meetings were held in early December in Priest River, Silverton and Coeur d'Alene. Additional meetings were held with federal, state and local agencies and tribal representatives. The Idaho Panhandle National Forest organized a meeting of scientists and Forest Health Protection personnel to discuss the current beetle outbreak, predicted course of the outbreak, and appropriate management responses. Comments were received from over 200 individuals, agencies, businesses and organizations before publication of the Draft EIS in January 1999. On February 2, 1999, a revised Notice of Intent was published to consolidate analysis into one EIS, the Douglas-fir Beetle Project EIS, and change the designation of the responsible officials for the project on the Idaho Panhandle from the District Rangers to the Forest Supervisor.

The DEIS and/or Summary was sent out to the project mailing lists on January 19-20, 1999. The Federal Register Notice of Availability was published on January 29, 1999; this notice incorrectly identified the date for comments due (FR Vol. 64, No. 19, page 4649). A revised Notice of Availability was published on February 5, 1999 correctly noting March 16, 1999 as the date for comments due (FR Vol 64, No. 24, page 5790). Four more open house meetings were held in Priest River, Coeur d'Alene, Harrison and Kellogg to answer questions and listen to the public. Approximately 890 letters were received; these were compiled, reviewed and responded to (Please see the FEIS Appendix A). Comments were used to develop further analysis, new alternatives and prepare the Final EIS. Public involvement over the course of this project included over 50 presentations given to organizations such as Rotary Clubs, Chamber of Commerce and professional societies. Additional public involvement included news releases, mailings, news articles, radio reports. Please see the FEIS, Chapter II and the Project File for more detail.

ALTERNATIVE DEVELOPMENT

The project interdisciplinary team developed alternatives to the proposed action based on the following key issues. In response to public comment two more alternatives were added between Draft and Final EIS; Alternative F was expanded to Priest Lake and Newport Ranger Districts and Alternative G was added to all of the Ranger Districts.

KEY ISSUES

A lengthy list of issues was brought up during project development. As public comments were received, alternative development strategies were continually modified, adjusted and added to as necessary. These issues were sorted into the following: key issues, analysis issues and issues not addressed in detail. Key issues are the issues used to develop the focus and specific activities of action alternatives. Analysis issues are addressed in the effects analysis and used to compare alternatives. The key issues are described in both Chapter II and III of the FEIS. Other analysis issues are described in detail in Chapter III of the FEIS. Issues not addressed in detail are either already addressed through alternative design or are outside the scope of this project. This Summary briefly describes key issues. For more detailed information, please see the FEIS.

The project alternatives respond to key resource issues identified during the public involvement and analyses process to the extent feasible within the physical, biological and legal limits of forest management on public lands. **The key issues include:**

Key Issue: Level of timber harvest
Some people have expressed concern that the proposed project does not capture enough value because it is treating too few forest stands infested by the Douglas-fir beetle. They feel that a loss of timber resource and value would result by not treating additional infested stands. Other people commented that harvesting may cause unwanted effects on forest values such as scenery, water quality, and habitat for certain wildlife species. Some are opposed to any cutting and others felt that harvest should remove only dead trees.

Addressing the Issue: Alternative D was developed to address the concern for not treating additional acres where the beetle infestation would likely spread. Alternative E was developed to address the concern for cutting green trees. This alternative would harvest only dead and beetle-infested trees. Alternative A (No Action) and Alternative G address the concern for harvest of any trees, living or killed by the beetle infestation. All Alternatives address the issue of harvest level to some degree.

Key Issue: Water resources and aquatic habitat
Some people commented that timber harvest, road construction and reconstruction, and other project activities would result in unacceptable effects to watersheds. While some people are willing to accept short-term negative effects in order to gain long-term benefits to water quality, other people are not. Other comments included concern about cumulative effects of harvesting in some areas where water quality conditions may already be at risk.

The proposed action includes ground-disturbing activities as noted earlier. The analysis area has high road densities and a number of roads in close proximity to streams. The extent of the beetle outbreak allows an opportunity to treat forest roads that are having a negative effect on aquatic values. In some cases, proposed timber harvest could increase

water yields, which could lead to increased sediment movement. Aquatic improvement work could also increase sediment. All of these activities could adversely impact beneficial uses such as fisheries and domestic water supplies. However, they could also result in long-term benefits and reduced risks to the watershed.

Addressing the Issue: Alternative E was specifically developed to reduce risks to water resources relative to the proposed action by limiting forest canopy reduction to only that created by the bark beetle infestation. Alternative C addresses concerns about potential watershed effects caused by sediment increases resulting from new road construction. Alternative G, developed in response to comments on the Draft EIS, includes vegetation and watershed restoration activities and no timber harvest. All alternatives address this issue to some degree.

Key Issue: Road management
Some people object to road construction because of potential effects on forest resources such as water quality and wildlife habitat. Similarly, some support road closures and obliteration to protect resources such as water quality, fisheries, wildlife and noxious weed prevention . Other people have expressed concern about losing access to the forest because of road closures proposed in this project. Some have expressed support for any additional access that might be provided by this project.

Addressing the Issue: Alternative C was developed to specifically address concern about road construction by not proposing any road construction. The Proposed Action, Alternative B, includes construction of some temporary roads on the Coeur d'Alene River and Priest Lake Ranger Districts. These would be obliterated following their use. Additionally, closure or obliteration of many existing roads is being proposed to reduce the existing high road densities, to lessen their effects and risks to watersheds and to increase wildlife security habitat. All alternatives used new road restrictions only on roads where alternate local access exists or there were no other viable alternatives to mitigate the risks these roads pose to aquatic or wildlife resources.

Key Issue: Activities within (Priest Lake Ranger District only) old growth
Some people feel that harvesting within old-growth forest is inappropriate and that old-growth forest structure cannot be improved upon or maintained through timber harvest or fuel reduction. Others question the need to retain stands of dead trees which have lost their old growth character. Selective harvesting within infested dry-site ponderosa pine old growth is proposed. These are stands which were historically open grown ponderosa pine with frequent low intensity fires that killed very few of the large trees. Due to the amount of dead and dying Douglas-fir trees in these stands, they are at risk from a high-intensity fire that would kill the large ponderosa pine. In order to maintain these stands as old growth, the dead and dying Douglas-fir understory trees that are forming fuel ladders could be removed.

Addressing the Issue: Alternative E was developed to specifically address this issue by not proposing any activities within old growth areas. Alternative A does not propose managing this resource. All Alternatives address this issue to some degree.

Key Issue: Fuel loadings
The public has raised concerns about the threat of fires escaping from National Forest System lands and endangering private land values. This threat is increased with the higher fuel levels resulting from the beetle infestation. This is especially of concern in areas where people are building residences close to forested areas (the wildland urban interface). Some private large land owners are concerned about the threat of fires from National Forest entering their lands.

Addressing the Issue: Alternative F was developed to specifically address concerns about the fuel loadings by concentrating fuels-reduction activities in areas adjacent to private property and the urban interface. All Alternatives address this issue to some degree.

Analysis Issues
Many people were concerned about effects of the alternatives on various other resources. These resources are managed under Forest Plan Standards and Guidelines. In the FEIS, effects are described in detail for the following:

- *Vegetation (including old growth)*
- *Threatened, Endangered and Sensitive Plants*
- *Noxious Weeds*
- *Watershed*
- *Soil Productivity*
- *Fisheries*
- *Fuels and Fire Behavior*
- *Air Quality*
- *Wildlife (including Threatened, Endangered and Sensitive; and Management Indicator Species)*
- *Recreation*
- *Scenery*
- *Heritage and Tribal Interests*
- *Finances*

ALTERNATIVE DESCRIPTIONS

The following discussion describes a full range of alternatives with the No Action Alternative, the Proposed Action (Alternative B) and five other alternatives designed to respond to key issues and public concerns. Nine additional alternatives were considered but dropped from further study for a variety of reasons. Alternative D was the preferred alternative at the time of publishing of the DEIS; this alternative was changed in a number of ways, responding to public comment, e.g. miles of road construction was reduced for

the final document. The selected alternatives are noted in the accompanying RODs. As noted earlier, two alternatives were added between the Draft and Final EIS.

For Alternatives B through G please see the sections titled Design Features Common to All Action Alternatives, and Mitigation for a more complete description of activities that would occur. These features respond to issues and mitigate effects by reducing, rectifying and avoiding certain impacts to the resources. Also see the FEIS map packet and Appendix D in the FEIS for specific unit and road activities. In addition, unit details and maps for the selected alternatives are included in this packet with the Record of Decision.

No Action Alternative

Alternative A is the No Action Alternative required by the National Environmental Policy Act (40CFR 1502.14) and the National Forest Management Act (36CFR 219.12(f)(7)). This alternative serves both as a viable alternative in itself and a baseline for comparison of the effects of all the alternatives. No Action means that the proposed timber harvest, reforestation, fuels reduction, aquatic rehabilitation, and road obliteration activities described in the Proposed Action would not be initiated at this time. Under this alternative, there would be no change from current management direction or from the level of ongoing management intensity within the project areas. Work previously planned in the project area would still occur under this alternative.

While this alternative doesn't propose any new management activities, the project is somewhat unique because the beetle activity would still result in relatively fast changes in the vegetation in forest stands where the insects are active. In this case, No Action would still result in visible and measurable changes caused by the beetle activity. For further discussions and explanations of the current epidemic and projected spread, please see each district's "Vegetation" section in Chapter III of the FEIS.

Work previously planned within the project area on each district would still occur under this alternative (See Appendix E of the FEIS). Effects of these activities are included in the effects discussion in Chapter III of the FEIS.

Alternative B (Proposed Action)

Alternative B represents the proposed action. It was designed to treat only the areas of known 1998 beetle infestation. The primary focus of this alternative is to show a balance of watershed improvements, vegetation rehabilitation and reductions in hazardous fuels. It was designed to begin vegetation restoration of infested areas by using timber harvests to trend forest stands towards later structural stages (i.e. larger trees), or to maintain or plant early seral conifers such as western white pine, western larch and ponderosa pine. Some temporary road construction (CDA River and Priest Lake Ranger Districts only) is proposed to access infested stands for harvest; these roads would be obliterated after use. Timber harvest and subsequent prescribed burning or mechanical fuel treatments are

designed to reduce hazardous fuels and, in some areas would facilitate reforestation. Of the improvement work (road reconstruction) proposed for existing roads with this alternative, 85% is designed specifically for watershed or wildlife habitat improvement and 15% is designed primarily for safe access for timber harvest and recreation uses. The watershed improvement work would be accomplished through either timber sale contracts or through other funding sources. Neither are dependent on timber sales being "bid up" to accomplish this work.

- Regeneration harvests and selective harvests are planned in units currently infested with bark beetle. Where needed, some temporary road construction is proposed; these roads would be obliterated after use.

- On most areas where beetle-caused mortality is light, **selective harvest** would remove only dead and dying trees. On some areas, where there is the opportunity to enhance the growth of the desired long lived seral tree species, or move the stand towards desired structural stages, some green trees in addition to the dead Douglas-fir would be removed. As a guide, selective harvest treatments were recommended in stands where Douglas-fir beetle would kill less than 50% of the large trees.

- On the Priest Lake District, there would be approximately 300 acres of selective harvesting dead Douglas-fir within infested dry-site old growth ponderosa pine stands under this alternative. These are stands which were historically open grown ponderosa pine with frequent low intensity fires that killed very few of the large trees. Due to the amount of dead and dying Douglas-fir in these stands, they are at risk from a high-intensity fire that would kill the large ponderosa pine. In order to maintain these ponderosa pine stands as old growth, the dead and dying Douglas-fir and understory trees that are forming a fuel ladder need to be removed. By harvesting these trees and underburning, these stands can be maintained longer as old growth ponderosa pine. This activity does not apply for the Coeur d'Alene River or Newport Ranger Districts.

- Generally, regeneration harvests would retain less than 30% of the trees remaining on the area. Regeneration harvests on the Coeur d'Alene River Ranger and Priest Lake Districts are proposed in stands at least 5 acres in size where greater than 50% of the stand of trees are dead and dying or are expected to die during the beetle outbreak. Some openings would exceed 40 acres, either with the harvest unit itself or because they are next to existing openings. Because these new openings are a result of natural occurrences (Douglas-fir mortality from beetle infestations), approval by the Regional Forester (Northern Region) is not required. (USDA Northern Regional Guide, Chapter 2 and 36 CFR 219.27 (d)(2)(iii)) For the Newport Ranger District portion, regeneration harvesting would only be done in stands where the beetles have returned the stand to structural stage 1, stand initiation. These are stands where less than 40 square feet of basal area per acre of live trees remain after beetle mortality and no live trees 21" DBH or larger would be removed. There would also be openings created greater than 40 acres and similarly,

approval by the Regional Forester of the Pacific Northwest Region would not be required. Subsequent fuels reduction and planting would follow.

- Each road was analyzed for existing risks to the watershed. Where these risks were identified and within the scope of the project, improvement projects are proposed to eliminate or reduce these risks. These include culvert removal, repairs or upgrades, reconstruction, obliteration, realignment, relocation, maintenance and drainage improvements.

- Aquatic restoration activities are proposed in terms of road reconstruction, realignment, relocation or obliteration (see above). These restoration activities also include removal of stream crossings and adding miles of stream made accessible to fish. Extensive road maintenance, stream crossing removal/ improvements and road obliteration are proposed.

- Alternative B would treat fuels created by the beetle infestation and logging slash in all proposed harvest units. Under the timber sale contract, merchantable sawlogs would be removed from the forest. The fuels remaining after harvest would be treated by either burning them in place, piling and burning , yarding tops of trees to landings to be burned, or lopping and scattering tops and limbs to speed decay and make them less flammable.

Alternative B is consistent with the Forest Plans for all resources with the following exception: Bumblebee analysis area on the Coeur d'Alene River Ranger District would not meet water quality standards because there are no effective restoration actions proposed within the beetle-infested areas to offset the increased risk of installing culverts on an existing road, or temporary spur road. It cannot be adequately demonstrated that the alternative will avoid contributing to the pollutant that caused a water quality limited segment to be listed (303d).

Alternative C

To address the public's concern over construction of any new roads on a heavily roaded landscape, the proposed action was modified to produce Alternative C. Alternative C also addresses concerns about potential watershed effects by eliminating new road construction as a potential source of sediment. Alternative C has the same features as Alternative B, with the exception that no new roads (permanent or temporary) would be constructed. This change alters the proposed logging systems in some units, and occasionally log haul routes, from those proposed in Alternative B.

Alternative C is consistent with the Forest Plans.

Alternative D

Alternative D was developed to address the concern for NOT treating acres where the beetle infestation would likely spread over the next 2 years. Alternative D takes a more adaptive approach by proposing to also treat certain nearby high hazard stands if they should become infested, or if infestation levels in these stands increase during this epidemic. These additional high risk stands currently have few or no known current beetle-infested trees.

For the Newport District, all stands in this alternative have current beetle infestations but the additional stands (compared to Alternative B) are a lower priority to harvest either because the infestation in 1998 was fairly light or because of access or other concerns.

It is important to the understanding of this alternative to remember that no treatments would take place in these additional, high potential stands unless the beetles actually become active or more active there. Alternative D includes monitoring of beetle activity over the next two years to validate the need for entry. Similarly, the watershed restoration road work associated with access to these additional stands, and the fuels treatment within the stands, would not necessarily occur either unless the infestations spread. This results in a slightly different level of certainty associated with this work being accomplished if this alternative were selected. This varying "level of certainty" is defined and described further in Appendix D of the FEIS for each road proposed for improvement work.

- Alternative D proposes the same types of vegetation treatments as those described for Alternative B. It also proposes similar treatments in some additional stands that are expected to become increasingly infested during the remainder of this epidemic as described above.

- Of the improvement work (road reconstruction) proposed for existing roads with this alternative, 84% is designed specifically for watershed or wildlife habitat improvement and 16% is designed primarily to facilitate safe access for timber harvest and recreation uses.

- The watershed and aquatic work includes that proposed for Alternative B as well as additional improvements.

- The Coeur d'Alene River Ranger District proposes both permanent and temporary road construction to access infested stands. The Priest Lake Ranger District proposes temporary roads only. The new permanent roads would be barricaded after use and maintained on the road system. Temporary roads would be obliterated after use. The Newport Ranger District does not propose any new road construction.

- Alternative D would treat fuels created by the beetle infestation and logging slash in all proposed harvest units. Under the timber sale contract, merchantable sawlogs would be

removed from the forest. The fuels remaining after harvest would be treated by either burning them in place, piling and burning , yarding tops of trees to landings to be burned, or lopping and scattering tops and limbs to speed decay and make them less flammable.

Alternative D is consistent with the Forest Plans for all resources with the following exception: Bumblebee analysis area on the Coeur d'Alene River Ranger District would not meet water quality standards because there are no effective restoration actions proposed within the beetle-infested areas to offset the increased risk of installing culverts on an existing road, or temporary spur road. It cannot be adequately demonstrated that the alternative will avoid contributing to the pollutant that caused a water quality limited segment to be listed (303d).

Alternative E

Alternative E was developed to respond to public concerns that live trees may be harvested along with dead trees and also in response to public concern for harvesting within old growth stands. Except as noted below, this alternative would treat most of the same forest stands as Alternative B except that only dead and dying trees would be harvested. Safety or other reasons (e.g. skyline corridors) may require some selective cutting of live trees. Additionally, this alternative drops the approximately 300 acres of selective harvest proposed in Alternative B within dry site old growth stands on the Priest Lake District.

By changing the harvest objectives to only removing the dead and dying trees, harvest prescriptions and fuel treatments were modified accordingly for Alternative E from those of the other alternatives. In some cases, where the beetle mortality would still open up enough tree canopy to allow successful growth of the desired tree species, modified regeneration harvest treatments were still proposed.

Alternative E has been designed, where the constraints allowed, to begin vegetation restoration of infested areas by using timber harvest to maintain or plant early seral conifer species such as white pine, western larch, and ponderosa pine. As in Alternative B, some temporary road construction is proposed to access infested stands. These roads would be obliterated after use.

Of the improvement work proposed for existing roads with this alternative, (85% is designed specifically for watershed or wildlife habitat improvement and 15% is designed primarily to facilitate safe access for timber harvest.

- As with the other alternatives, Alternative E would treat fuels created by the beetle infestation as well as logging slash in all proposed harvest units. Some fuels treatments had to be altered from those proposed in Alternative B to correspond with the change in harvest objectives.

Alternative E is consistent with the Forest Plans for all resources with the following exception: Bumblebee analysis area on the Coeur d'Alene River Ranger District would not meet water quality standards because there are no effective restoration actions proposed within the beetle-infested areas to offset the increased risk of installing culverts on an existing road, or temporary spur road. It cannot be adequately demonstrated that the alternative will avoid contributing to the pollutant that caused a water quality limited segment to be listed (303d).

Alternative F

Alternative F was designed in response to public comment that asked the Forest Service to concentrate work on the risks to homes and property adjacent to the National Forest. It was considered and analyzed for the Coeur d'Alene River Ranger District in the Draft EIS. For the Final EIS, Priest Lake and Newport Ranger Districts also developed and analyzed Alternative F for their project areas.

This alternative is similar to Alternatives B and D except that it focuses timber harvest, fuel treatments, and watershed improvements **on infested and high risk areas** of National Forest system lands near urban areas and other private lands. Near the urban areas, additional prescribed burning and fuelbreaks are proposed in some areas of heavy fuels outside the harvest units.

Alternative F also uses the adaptive approach used by Alternative D (limited to some areas near private lands) by proposing to also treat certain nearby high risk stands and their fuels if they should become infested, or if infestation levels in these stands increase during this epidemic. As in Alternative D, no treatments would take place in these additional, high potential stands or associated roads unless the beetles actually become active or more active there. This varying "level of certainty" is defined and described further in Appendix D of the FEIS.

Alternative F has been designed to begin vegetative restoration of infested areas by using timber harvest to trend some forest stands towards later structural stages (i.e. larger trees), or to maintain or plant early seral conifer species such as white pine, western larch, and ponderosa pine. Some temporary road construction is proposed on the Coeur d'Alene River and Priest Lake Ranger Districts to access infested stands. These roads would be obliterated after use.

Timber harvest and subsequent prescribed burning or mechanical fuel treatments would reduce hazardous fuels and in some cases facilitate reforestation. Near urban areas additional prescribed fire outside harvest areas would be used to reduce existing fuel loads and some fuelbreaks would be constructed on the Coeur d'Alene River Ranger District, to help isolate fire risks away from private lands (see included Alternative F maps).

Also included in this alternative are approximately 1628 acres of ecosystem improvement burning on the Coeur d'Alene River Ranger District. Some of these acres overlap selective harvest units and the rest are outside of proposed harvest units. These burns are proposed to meet multiple resource objectives for increasing wildlife forage, reducing fuels and reducing encroaching fir trees on drier sites. In addition, fuelbreaks were designed near the urban areas at ridgetops and adjacent to private ownership on the Coeur d'Alene River Ranger District.

Of the improvement work (road reconstruction) proposed for existing roads with this alternative 85% is designed specifically for watershed or wildlife habitat improvement and 15% is designed primarily to facilitate safe access for timber harvest, recreation uses and/or fire exclusion.

Alternative F is consistent with the Forest Plans for all resources.

Alternative G

Alternative G was developed in response to public comment during the review and comment period for the Draft EIS, requesting the agency to consider an alternative that completed restoration activities without the use of commercial timber harvest. The two primary activities considered were road work for aquatic and wildlife improvements, and the use of prescribed fire and non-commercial vegetation treatments to accomplish the vegetation restoration goals.

Alternatives D and F were used as a base to select potential watershed and vegetation restoration and fuels reduction treatments proposed in this alternative. Vegetation treatments are included where prescribed fire and other non-commercial treatments could feasibly be used to treat excess fuel loadings and trend those forest stands toward desired conditions. Only those acres were included where treatments could meet these objectives. Manual thinning and pruning of submerchantable timber (<7 inch diameter) as well as some felling and lopping of larger timber would be required on some of these acres to meet restoration objectives.

Prescribed burning and some mechanical treatments would be used to reduce hazardous fuels, although only a limited amount of fuels created by the current beetle epidemic could be treated at this time.

Approximately 200 acres of the old growth ponderosa pine would be treated with prescribed fire. This would be implemented by felling the ladder fuels first and then burning when conditions favor a low intensity burn to avoid mortality of the large ponderosa pine.

All of the improvement work proposed for existing roads with this alternative are designed specifically for watershed or wildlife habitat improvement (see Appendix D of the FEIS for individual road information).

Watershed improvement work would be accomplished entirely through appropriated funding sources. Based on current funding availability and trends, the activities proposed in Alternative G would likely be accomplished over a longer period of time than in the other alternatives.

Alternative G is consistent with the Forest Plans for all resources with the following exception: On the Newport Ranger District, it may not meet standards for cover:forage ratio in winter range.

COMPARISON OF EFFECTS OF THE ALTERNATIVES

This summary of the comparison of alternatives is presented here for all resources analyzed in Chapter III. It is a summary only, for more information please see Chapter III of the FEIS under each resource. Resources are presented under the key issues first and thence in alphabetical order.

The following table presents the key features of all alternatives for each of the three Ranger Districts.

Table S-1. Proposed Activities, by Alternative, Coeur d'Alene River Ranger District.
All figures in this table are approximate.

Vegetation Restoration					Aquatic Restoration					Fuels Treatment acres		
ALT.	Regen (ac.) A	Select (ac.)	Miles of Road Construction*		Miles of Road**			# stream crossings removed or improved	fish migration miles accessed	Rx Burn	Pile	Mech.
			Temp	Perm	Rem	Rec	Rel					
Alt A	0	0	0	0	0	0	0	0/0	0	0	0	0
Alt B	852	9,379	7.8	0	68	19.6	0	126/79	2.1	867	89	9,275
Alt C	852	9,379	0	0	68	18.3	0	126/79	2.1	867	89	9,275
Alt D	1,176	11,047	14.9	3.9	86	27.7	1	158/87	4.6	1,829	89	10,305
Alt E	0	10,231	7.9	0	68	19.6	0	126/79	2.1	373	0	9,858
Alt F	761	7,275	4.8	0	40	13.2	0	72/58	0	7,034****	187	2,554
Alt G	0	0	0	0	121.3	13.2	1	225/87	7.5	1,115****	0	0

**Temp = Temporary Road, Perm = Permanent Road Temporary Roads would be removed after use, but are not counted again in the column for miles of road to be removed*

*** Rem = Removal (Obliterated), Rec = Reconstruction, Rel = Relocation*

***** Includes wildlife ecosystem burning acres.*

Table S-2. Proposed Activities, by Alternative, Priest Lake Ranger District.
All figures in this table are approximate.

Vegetation Restoration					Aquatic Restoration					Fuels Treatment acres		
ALT.	Regen (ac.) A	Select (ac.)	Miles of Road Construction*		Miles of Road**			# stream crossings removed or improved	fish migration miles accessed	Rx Burn	Pile	Mech.
			Temp	Perm	Rem	Rec	Rel					
Alt A	0	0	0	0	0	0	0	0/0	0	0	0	0
Alt B	3,475	1,906	13.0	0	53.0	80.8	0.8	43/50	5.6	3,090	667	1,623
Alt C	3,475	1,906	0	0	54.7	79	0.8	43/50	5.6	3,029	667	1,684
Alt D	4,054	3,429	14.4	0	54.2	81.3	0.8	43/50	5.6	3,705	612	3,167
Alt E	2,032	3,044	12.5	0	51.9	80.8	0.8	43/50	5.6	1,929	720	2,428
Alt F	2,018	1,992	7.2	0	34.1	40	0.8	28/49	3.6	1,946	381	1,683
Alt G	0	0	0	0	54.2	65.3	0.8	43/49	5.6	366***	0	0

**Temp = Temporary Road, Perm = Permanent Road Temporary Roads would be removed after use, but are not counted again in the column for miles of road to be removed*
*** Rem = Removal (Obliterated), Rec = Reconstruction, Rel = Relocation*
**** includes manually thin and prune, and manually fell and lop.*

Table S-3. Proposed Activities, by Alternative, Newport Ranger District.
All figures in this table are approximate.

Vegetation Restoration					Aquatic Restoration					Fuels Treatment acres		
ALT.	Regen (ac.) A	Select (ac.)	Miles of Road Construction*		Miles of Road**			# stream crossings removed or improved	fish migration miles accessed	Rx Burn	Pile	Mech.
			Temp	Perm	Rem	Rec	Rel					
Alt A	0	0	0	0	0	0	0	0	0	0	0	0
Alt B	29	1,492	0	0	3.9	12.4	0	0/3	0	896	0	625
Alt C	29	1,492	0	0	3.9	12.4	0	0/3	0	896	0	625
Alt D	162	4,600	0	0	8.8	14.0	0	0/3	0	3,269	0	1,493
Alt E	29	1,492	0	0	3.9	12.4	0	0/3	0	896	0	625
Alt F	133	3,251	0	0	3.7	8.0	0	0/3	0	2,443	0	941
Alt G	199	0	0	0	8.8	12.2	0	0/3	0	2,736***	0	0

**Temp = Temporary Road, Perm = Permanent Road Temporary Roads would be removed after use, but are not counted again in the column for miles of road to be removed*
*** Rem = Removal (Obliterated), Rec = Reconstruction, Rel = Relocation*
**** includes manually thin and prune, and manually fell and lop.*

Key Issue: Level of Timber Harvest

As noted throughout this document, the mortality of large Douglas-fir trees from the beetle infestation is affecting thousands of acres across the Idaho Panhandle and the Colville National Forests. The amount of timber harvest to be conducted is one of the key issues. The measurement of change includes the level of harvest, which has been divided into four categories to more closely track the comments received on this issue. Those categories are as follows:

- Level of harvest in stands currently infested by Douglas-fir beetle,
- Total acres of treatment in stands potentially infested by Douglas-fir beetle,

- Total acres of treatment removing dead and beetle-infested trees only,
- Total acres of treatment removing some additional green trees.

The table below provides a comparison for the three Ranger Districts and the seven alternatives.

Table S-4. Level of harvest in beetle-infested areas: Approximate acres of treatment in stands **currently infested**

District	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Coeur d'Alene	0	10,231	10,231	10,231	10,231	8036	0
Priest	0	5,380	5,380	5,380	5,077	3,346	0
Newport *	0	1521	1,521	4,763	1,521	3384	0
Total	**0**	**17,132**	**17,132**	**20,374**	**16,829**	**14,766**	**0**

*All units on Newport have Douglas-fir beetle infestations

Table S-5. Level of harvest in beetle-infested areas: Approximate acres of treatment in stands **with high potential for infestation spread, if spread occurs**

District	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Coeur d'Alene	0	0	0	1992	0	0	0
Priest	0	0	0	2103	0	664	0
Newport*	0	0	0	0	0	2135	0
Total	**0**	**0**	**0**	**4095**	**0**	**2799**	**0**

** All units on Newport have Douglas-fir infestations*

Table S-6. Level of harvest in beetle-infested areas: Approximate acres of treatment proposed for removing **only dead and beetle-infested trees**

District	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Coeur d'Alene	0	9379	9379	9886	10231	7275	0
Priest	0	1146	1146	2623	5077	1199	0
Newport	0	1250	1250	4243	1521	3125	0
Total	**0**	**11775**	**11775**	**16752**	**16829**	**11599**	**0**

Table S-7. Level of harvest in beetle-infested areas: Approximate acres of treatment removing **some green trees in addition to dead and infested trees**

District	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Coeur d'Alene	**0**	**852**	**852**	**2377**	**0**	**761**	**0**
Priest	0	4235	4235	4860	0	2811	0
Newport	0	271	271	519	0	259	0
Total	**0**	**5358**	**5,358**	**7756**	**0**	**3831**	**0**

Summary Of Species Composition Changes

Each action alternative moves the components of the landscape on a trend. (The structural stages under all alternatives remain the same except Alternative G on Newport RD. For stand structure changes, mortality from beetle infestation is no different than regeneration harvesting.) In all alternatives on the Coeur d'Alene and Priest Lake Project Areas, stands

in which ponderosa pine or western larch are an important component, there will be an improvement in stand conditions over the short term as competition between Douglas- fir and these species is reduced due to mortality of the Douglas -fir. For Alternatives A and G on the Coeur d'Alene and Priest Lake Districts and Alternative A on the Newport Districts, no long term increase in desired forest cover types would take place. There will be a continued trending away from the desired conditions of more long-lived seral species.

On the Coeur d'Alene and Priest Lake Districts, Alternatives B through F the forest cover types trend in the desired direction toward an increase in more long-lived seral species. For Alternatives B, C, D, E, F, and G, the forest cover types trend in the desired direction away from the Douglas-fir cover type on the Newport District but the increase in western larch, white pine and ponderosa pine cover types is very small due to the small amount of regeneration harvesting that is proposed.

Table S-8. Forest Cover Type acres and percent gain of desired species restoration, by alternative, by Ranger District.

Ranger District	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Coeur d'Alene	0 acres 0 %	852 acres +.6%	852 acres +.6%	1176 acres +.8%	373 acres +.25%	761 acres +.5%	0 0
Priest Lake	1,258 acres + 1.0%	3,695 acres + 3.0%	3,695 acres + 3.0%	4,252 acres + + 3.5%	2,431 acres +1.9%	2,530 acres +2.1%	1,258 ac +1.0%
Newport	29 acres 0.1%	29 acres 0.1%	29acres 0.1%	162 acres 0.5%	29 acres 0.1%	133 acres 0.4%	199* 0.6%*

For Alternatives A and G on the Priest Lake and Newport Project Areas there is expected to be some increase in growing space for existing ponderosa pine and western larch due to the mortality in Douglas- fir on these acres. A short term forest cover type change will result until reestablishment of Douglas fir or grand fir. For the Coeur d'Alene Project Area, no cover type changes are expected to result in a ponderosa pine or western larch cover type under Alternatives A and G and resultant changes are expected to trend to grand fir. For the Newport project area in Alternative G, some stands of Douglas fir will be open enough to allow planting and establishment of desired seral species resulting in a cover type change to these units.

Over the Cumulative Project Area which included the Newport, Priest lake, and Coeur d'Alene project areas, There would be a little over a 1% change toward desired species composition in the maximum action alternative.

Changes In Structure Or Size Classes

Measurement Of Change - Percentage Change In Size Class, By Project Area.

On the Coeur d'Alene River and Priest Lake Ranger Districts, the Action Alternatives would not change the size class (forest structure) beyond that which will occur as a result

of the Douglas-fir beetle infestation. Therefore, there would not be any difference between Alternative A (the result of the beetle infestation) and the other alternatives.

On the Newport Ranger District, only Alternative G would change structural changes beyond that which will occur as a result of the beetle-infestation; this change is 0.3%.

Key Issue: Water Resource and Aquatic Habitat
In Chapter II of the FEIS, the issues and measurements of change associated with watersheds, and aquatic habitat define and describe *sub-watershed* (in the general range of 20,000 to 100,000 acres) and *tributary* (1,000 to 10,000 acres) scale responses and effects. Watershed systems tend to integrate water resource responses (water quality, runoff, stream condition) very well with respect to project management activities. However, some of those response parameters become unresponsive to cumulative effects evaluations at very large scales where multiple and highly diverse watersheds are combined into basin-scale areas.

Each of the three main project areas assessed were analyzed for at least two scales: the local site or tributaries where activities take place; and the larger watershed. The cumulative effect watershed (or watershed area) is the logical culmination point of water flow where the effects of the distributed project activities could possibly integrate or synchronize over time and space and be addressed cumulatively in a larger watershed.

Often the physical effects of runoff modifications, sediment loading, and water temperature, if they occur in projects of this scale, are technically immeasurable and/or not observable at larger watershed and subbasin scales due to desynchronization (individual tributaries respond at different times of the year, some are slower to respond than others to disturbance events); the inherent large range of variability that watershed processes operate within and under which these drainages have evolved; and due to the fact that watershed systems are inherently dynamic.

Therefore, for purposes of effectively summarizing the differences between the watershed elements of the project for the entire project, or for each of its three general project areas, four key measurements are the most useful. The finer scale assessments and comparisons can be found in the Watershed sections in Chapter III of the FEIS.

The following measures are compared by alternative in the tables below.

Net Stream Crossings. The net change in the number of inventoried stream crossings in the project area compared to the existing (present) conditions. New road construction or reconstruction of roads without culverts can add to the net value. Road or crossing obliteration or conversion to fords would reduce it.

This parameter is a factor in the total risk or risk reduction that an alternative provides to the project. Crossings reflect potential risk of introduction of sediment into a stream

course, potential hydraulic modification of a stream, local storm flow augmentation, and fish migration barriers. By itself, net stream crossings are an indicator that must be further qualified to estimate effects. The parameter is a derivative of the "crossing density" for a watershed (the number of crossings per square mile of watershed area).

Net Associated Risk. The risk of annual sediment production was calculated in the analyses at inventoried road crossings. Crossings that would be upgraded, fitted for safe overflow, or crossings that are eliminated would reduce net risk based on the chance of failure and the magnitude of failure. This is a primary evaluation factor for determining watershed improvement potential within the scope of this project.

Net Roads. The relative miles of road following implementation of each alternative as compared to present (existing condition). The net value can increase with new construction of permanent or temporary road. The value can decrease with the stabilization of road trend to a "hydrologically inert" status.

The parameter is a derivative of the "road density" for a watershed (the miles of road per square mile of watershed area). Net roads is an indicator of changes of watershed risks that are associated with erosion sources, fill failures, episodic stream blockages, and peak flow augmentations. By itself, net road miles are an indicator that must be further qualified to estimate effects.

Net Encroaching Road. Certain roads that are encroaching on stream channels or their active flood prone areas were inventoried. Such roads are a source of sediment, cause adverse hydraulic effects in the stream, and inhibit channel recovery from disturbances. The net value would decrease when a road segment is eliminated or rendered hydraulically inert.

This is a primary evaluation factor for determining watershed improvement potential within the scope of this project. Encroaching roads can potentially be related to large scale sediment sources, crossing failures, disruption to riparian functions, and direct inhibitors to the stream systems' ability to adjust effectively to disturbances generated by the road and by the watershed.

Subbasin Scale Comparisons, Coeur d'Alene River Ranger District

Table S-9. Subbasin-wide comparison for Coeur d'Alene River Ranger District

Watershed Name: Coeur d'Alene Analysis Area	HUC: 170103 -01 -03 -04 & -05

Measure of Change	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Net Stream crossings (#)	-140	-236	-250	-255	-236	-200	-365
Net associated rish (tons/year)	-426	-1,251	-1,267	-1,343	-1,151	-926	-1,650
Net roads (miles)	-75	-135	-142	-142	-135	-110	-196
Net encroaching (miles)	-0.3	-4.7	-4.7	-5.2	-4.7	-3	-8.9

All the alternatives, including No Action (A), indicate substantial overall watershed improvements distributed widely over the Coeur d'Alene Lake and River subbasins. Substantial watershed improvements are ongoing or are reasonably foreseeable, even without any of the action alternatives of this project. However, all the action alternatives indicate accelerated improvement activities. Actual watershed restoration would be realized at the smaller watershed and tributary scales.

Alternative G would result in the greatest net reduction of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; and since there is only a minimal amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations.

The action Alternatives B, C, D, and E would result in the similar reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin wide, the net effects would be substantial local water resource improvements that would be most evident in several tributary areas. The improvements however are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

Action Alternative F and the No Action Alternative A (because of reasonably foreseeable actions that are already scheduled or committed to) would result in some reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin, the net effects would be substantial local water resource improvements that would be most evident in tributary areas. The improvements however are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

Subbasin Scale Comparisons, Priest Lake Ranger District

Table S-10. Subbasin-wide comparison for Priest Lake Ranger District

Watershed Name: Priest River							**HUC: 17010215**
Measure of Change	**Alt. A**	**Alt. B**	**Alt. C**	**Alt. D**	**Alt. E**	**Alt. F**	**Alt. G**
Net stream crossings (#)	-9	-52	-52	-52	-52	-37	-52
Net associated risk (tons/year)	-29.3	-60.5	-60.5	-60.5	-59.5	-59.1	-60.5
Net roads (miles)	-3.8	-56.8	-58.5	-58.0	-55.6	-37.9	-58.0
Net encroaching road (miles)	-0.1	-1.9	-1.9	-1.9	-1.9	-1.3	-1.9

All the alternatives, including alternative A, indicate substantial overall watershed improvements distributed widely over the Priest River subbasin. Substantial watershed improvements are ongoing or are reasonably foreseeable, even without any of the action alternatives of this project. How ever, all the action alternatives indicate accelerated improvement activities. Actual watershed restoration would be realized at the smaller watershed and tributary scales.

Alternative G would result in the greatest overall net improvements to watersheds. It would result in similar reductions of erosion and sediment sources and risks of riparian and instream damages as Alternatives B, C, and D; but only introduces minimal amounts of new or compounded disturbance from vegetative management activities.

All the action alternatives would result in the similar reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin wide, the net effects would be substantial local water resource improvements that would be most evident in tributary areas. The improvements however are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

The No Action Alternative A (because of reasonably foreseeable actions that are already scheduled or committed to) would result in some reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin wide, the net effects would be substantial local water resource improvements that would be most evident in tributary areas. The improvements however are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

Subbasin Scale Comparisons, Newport Ranger District

Table S-11. Subbasin-wide comparison for Newport Ranger District

Watershed Name: Newport - Pend Orielle Analysis Area	HUC: 17010216

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Net stream crossings (#)	0	-3	-3	-13	-3	-4	-13
Net associated risk (tons/year)	0	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
Net roads (miles)	1.6	-2.3	-2.3	-7.2	-2.3	-2.1	-7.2
Net encroaching road (miles)	0	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4

All the action alternatives indicate at least some overall watershed improvements distributed widely over the Newport area in the lower Pend Oreille subbasin. The no action alternative A gives no indication of any proactive watershed restoration at this scale. However, all the action alternatives indicate the presence of some improvement activities. Actual watershed restoration would be realized at the smaller watershed and tributary scales.

Alternative G would result in the greatest net reduction of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; and since there is only a minimal amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations.

Alternative D would result in similar reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin wide, the net effects would be frequent local water resource improvements that would be most evident in tributary areas. The improvements however are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

The action alternatives B, C, and E would result in the similar reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin wide, the net effects would be limited local water resource improvements that would be most evident in tributary areas. The improvements however are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

The No Action alternative A (because of reasonably foreseeable actions that are already scheduled or committed to) would not likely result in reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; and they are compounded somewhat by the amount of new disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Subbasin wide, the net effects would be continuation of the risks to water resources that in place under the existing conditions.

Project Area-wide Comparisons (All three Ranger Districts)

Table S-12. Project Area-wide comparisons (encompassing the three Ranger Districts)

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Net stream crossings (#)	-149	-291	-305	-320	-291	-241	-430
Net associated risk (tons/year)	-455	-1312	-1328	-1404	-1211	-986	-1711
Net roads (miles)	-77	-194	-203	-207	-193	-150	-261
Net encroaching road (miles)	-0.4	-7.0	-7.0	-7.5	-7.0	-4.7	-11.2

Similarly to the subbasin comparisons, all the alternatives including the no action alternative, indicate substantial overall watershed improvements distributed widely over the Newport-Priest-Coeur d'Alene project area. Substantial watershed improvements are ongoing or are reasonably foreseeable, even without any of the action alternatives of this project. However, all the action alternatives indicate accelerated improvement activities. Actual watershed restoration would be realized only at the smaller watershed and tributary scales.

Alternative G would result in the greatest reduction of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; and since there is only a minimal amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations.

The action alternatives B, C, D, and E would result in the similar reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Project-wide, the net effects would be substantial local water resource improvements that would be most evident in tributary areas. The improvements, however, are dominant in individual watersheds. Some watersheds would simply have no net effects in terms of risk to water resources (see watershed effects in Chapter III of the FEIS).

Action Alternative F and the no action alternative A (because of reasonably foreseeable actions that are already scheduled or committed to) would result in some reductions of erosion and sediment sources and risks of riparian and instream damages that are present in the existing conditions; but they are limited somewhat by the amount of new or compounded disturbances being introduced by logging or other vegetative management activities that exceed those being induced by the beetle infestations. Project-wide, the net effects would be substantial local water resource improvements that would be most evident in tributary areas.

Fisheries and Effects to Management Indicator Fish Species

The effects to Management Indicator fish species (MIS), cutthroat and bull trout, are assessed by several measurements. These include the following:

- Amount of riparian vegetation removed is an appropriate surrogate for changes in stream temperature, habitat diversity, cover complexity and channel stability.
- Sediment delivery risk assesses potential sediment delivery from management activities; a majority of these risks are located where roads cross streams.
- Modifying culverts at stream crossings increases fish passage.
- The amount of encroaching road can be reduced by road obliteration.

Sediment Delivery Risk Narrative

The changes in sediment delivery risk is best explained with a narrative. The short term effects are related to the number of new culverts crossing streams and the length of new road. Long-term effects are the amounts of annual risk of sediment delivery.

Coeur d'Alene Project Area: For all watersheds except Fernan, Alternative G would have the highest amount of sediment risk reduction. This is a direct result of road channel crossing upgrades (increased culvert size to meet 100-year-flow) and the removal of road channel crossings and encroaching roads. Alternatives C, D, and E respectively, would have the next highest risk reduction in sediment delivery. This is a direct result of road channel crossing upgrades (increase culvert size to meet 100-year-flow) to access timber harvest units and the removal of unmaintained crossings and roads. The No-Action Alternative (Alternative A) would have the lowest risk reduction in sediment delivery, except in the Fourth of July watershed, which is equal under all alternatives. Reductions in the risk of sediment delivery should be paralleled by decreases in bedload and sediment, thus changes in stream morphology could be positively affected, having net benefits to the composition and quality of fish habitat. The small amount of road building in riparian areas, in combination with upgrading culverts (thereby reducing risk) would not result in a significant cumulative effect to the Management Indicator Species within the watershed. Given the amount of roads within the cumulative effects areas, the benefits of restoration activities would be minimal but are a necessary first step towards restoration of watersheds. There would be a short-term increase in sediment under all alternatives (except Alternative A) with the replacement of stream crossings within previously-decommissioned roads or newly constructed roads. With the foreseeable removal of stream channel crossings under Alternative A, there would be a short-term increase in sediment in selected watersheds.

Priest Lake Project Area: All alternatives, other than the No Action Alternative (Alternative A) would result in a significant long-term decrease in the risk of failure at stream crossings. There would be, however, a short-term increase in risk within three of the cumulative watershed effects area related to temporary road building in Alternative B,

Alternative D, and Alternative E. Because the temporary roads would not be located close to streams, they have only a low probability of delivering sediment to the stream; therefore, there would be no significant cumulative effects from these activities.

Newport Project Area: Except in Skookum, all alternatives, including the no action alternative (Alternative A) would result in no decrease in the risk of failure at stream crossing in all watershed analysis areas. The lack of reduced risk is due to private lands which need many of the roads for access. Under all action alternatives, there will be road obliteration and associated culvert removal in the Skookum watershed analysis area. There will be short term sediment delivery to Skookum associated with the culvert removal and long term reduction in risk of sediment.

Fisheries Measurements of Change

The following tables display the changes to fisheries under each alternative. *Numbers shown in the table are approximate.* For more detail, please see Chapter III "Fisheries" section for each Ranger District.

Table S-13. Effects to fisheries measurements of change, Coeur d'Alene River Ranger District.

Measurement	ALT. A	ALT. B	ALT. C	ALT. D	ALT. E	ALT. F	ALT. G
Riparian vegetation removed	0	576 ft	0 ft	1189 ft	576 ft	308 ft	0 ft
Fish passage increase	0.4 mi	2.5 mi	2.5 mi	5.0 mi	2.5 mi	0.4 mi	7.9 mi
Encroaching road reduction	0.3 mi	4.7 mi	4.7 mi	5.2 mi	4.7 mi	3.0 mi	8.9 mi

Table S-14. Effects to fisheries measurements of change, Priest Lake Ranger District.

Measurement	ALT. A	ALT. B	ALT. C	ALT. D	ALT. E	ALT. F	ALT. G
Riparian vegetation removed (feet)	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
Fish passage increase (miles)	0 mi	5.6 mi	5.6 mi	5.6 mi	5.6 mi	3.6 mi	5.6 mi
Encroaching road reduction (miles)	0.1 mi	1.9 mi	1.9 mi	1.9 mi	1.9 mi	1.3 mi	1.9 mi

Table S-15. Effects to fisheries measurements of change, Newport Ranger District.

Measurement	ALT. A	ALT. B	ALT. C	ALT. D	ALT. E	ALT. F	ALT. G
Riparian vegetation removed (feet)	0	0	0	0	0	0	0
Fish passage increase (miles)	0	0	0	0	0	0	0
Encroaching road reduction (miles)	0	0.4 mi	0.4 mi	0.4 mi	0.4 mi	0.4 mi	0.4 mi

Table S-16. Species viability (# of watersheds), Coeur d'Alene River District.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt F	Alt G
Likely to result in long-term risk to individuals	0	1	1	1	1	1	0
Likely to result in no change	10	6	6	7	6	7	4
Likely to result in long-term reduction in risk to individuals	4	7	7	6	7	6	10
Likely to result in long-term reduction in risk to populations	0	0	0	0	0	0	0

Table S-17. Species viability (# of watersheds), Priest Lake Ranger District.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Likely to result in long-term risk to individuals	0	0	0	0	0	0	0
Likely to result in no change	8	3	3	3	3	3	3
Likely to result in long-term reduction in risk to individuals	1	6	5	6	6	6	5
Likely to result in long-term reduction in risk to populations	0	0	1	0	0	0	1

Table S-18. Species viability (# of watersheds), Newport Ranger District.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Likely to result in long-term risk to individuals	0	0	0	0	0	0	0
Likely to result in no change	6	5	5	4	5	4	4
Likely to result in long-term reduction in risk to individuals	0	1	1	2	1	2	2
Likely to result in long-term reduction in risk to populations	0	0	0	0	0	0	0

Key Issue: Road Management

The alternatives have a variety of proposed activities that would change road management. These activities affect water quality, wildlife habitat, spread of noxious weeds, fish habitat, scenery and people's access to the forest. New permanent roads provide more access to the forest and road obliteration removes access to the forest. Road reconstruction removes chronic sediment sources and potential road failures as well as improving driveability. As these issues have already been discussed within the watershed issue section, a comparison of the alternatives for road management follows in a table format.

Table S-19. Measurements of Change in Road Management (by approximate miles), Coeur d'Alene River Ranger District.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt G
Permanent roads	0	0	0	3.9	0	0	0
Temporary roads*	0	7.8	0	14.9	7.9	4.8	0
Road reconstruction	0	19.6	18.3	27.7	19.6	13.2	13.2

Table S-19. Measurements of Change in Road Management, cont'd.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt G
Roads removed	0	68	68	86	68	40	121.3
Roads relocated	0	0	0	1	0	0	1
Open road density (mile/sq mile)	1.4	1.2	1.2	1.2	1.2	1.3	1.2
Miles of open road being closed	0	21	21	22	21	7	22

**Temporary roads are obliterated following use, but are not counted in the "Rds. Removed" line.*

Table S-20. Measurements of Change in Road Management (by approximate miles), Priest Lake Ranger District.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	ALT. F	ALT. G
Permanent roads	0	0	0	0	0	0	0
Temporary roads*	0	13.0	0	14.4	12.5	7.2	0
Road reconstruction	0	80.8	79	81.3	80.8	40.0	65.3
Roads removed	0	53.0	54.7	54.2	51.9	34.1	54.2
Roads relocated	0	0.8	0.8	0.8	0.8	0.8	0.8
Open road density (mile/sq mile)	2.43	2.4	2.4	2.4	2.4	2.42	2.4
Miles of open road being closed	0	10.1	11.4	11.0	10.1	7.6	11.0

**Temporary roads are obliterated following use, but are not counted in the "Rds. Removed" line.*

Table S-21. Measurements of Change in Road Management (by approximate miles), Newport Ranger District.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	ALT. F	ALT. G
Permanent roads	0	0	0	0	0	0	0
Temporary roads*	0	0	0	0	0	0	0
Road reconstruction	0	12.4	12.4	14.0	12.4	8.0	12.2
Roads obliterated	0	3.9	3.9	8.8	3.9	3.7	8.8
Roads relocated	0	0	0	0	0	0	0
Open road density (mile/sq mile)	2.59	2.55	2.55	2.52	2.55	2.56	2.52
Miles of open road being closed	0	3.3	3.3	6.4	3.3	3.1	6.4

**Temporary roads are obliterated following use, but are not counted in the "Rds. Removed" line.*

Key Issue: Activities Within Old Growth

Measurement of Change: Treatment within old growth areas.

Table S-22. Acres of treatment in old-growth areas - Priest Lake District

Alternative	Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	ALT. G
Approximate Acres Old Growth Treated	0	300	300	340	0	340	195

Harvesting in areas designated for old growth management is proposed only on the Priest Lake Ranger District and only in stands where dry- site ponderosa pine old growth characteristics can be enhanced or maintained through harvesting.

Key Issue: Fuel Loadings

The past 100 years of human activity within inland forested ecosystems has resulted in a significant change from historic patterns and is indicative of unhealthy ecosystem conditions. Over 100 years of timber harvest, approximately 70 years of effective fire exclusion, and introduction of non-native species have resulted in changes in vegetation species, composition, and structure. Because of these changes, low and mixed severity fires are now an improbable occurrence in many forests and severe stand replacing fires are more likely. Opportunities to reduce the intensity of potential fires are available with prescribed fire and mechanical fuels treatment. Timber harvests would affect both short- and long-term fuel loading. Treating Douglas-fir beetle infestation areas where harvest takes place provides an opportunity to reduce fuel loading and continuity within stands and over the analysis area and provides opportunities to reestablish seral species.

The no action alternative takes no new steps to interrupt the trend of increased fire intensity and severity. Action alternatives propose prescribed burning to reduce fuel accumulations and reintroduce seral species (ponderosa pine, white pine and larch) and make progress towards reducing potential intensities and severities of wildfire in beetle infested areas. Even with this treatment, untreated areas and areas treated with salvage harvest would continue to trend toward conditions that favor higher intensity wildland fires.

Measurements of Change: Fuels accumulation acres of increased fuel accumulation in beetle-infested areas remaining untreated; Acres treated with prescribed fire.

Table S-23. Approximate Acres of increased fuel accumulations remaining untreated, and prescribed fire treatments.

Measure of Change	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Coeur d'Alene River RD							
• Fuels accumulation acres to remain untreated	26,700	16,469	16,469	14,477	16,469	17,036	25,585
• Prescribed fire acres	0	867	867	1,829	373	7,034	1,115*
Priest Lake RD							
• Fuels accumulation acres to remain untreated	11,221	5,840	5,840	3,738	6,144	7,211	10,845
• Prescribed fire acres	0	3,090	3,030	3,705	1,929	1,946	366
Newport RD							
• Fuels accumulation acres to remain untreated	5,275	3,754	3,754	513	3,754	1,891	2,539
• Prescribed fire acres	0	896	896	3,269	896	2,443	2,736

* *Includes wildlife/ecosystem burning acres.*

Air Quality

Air quality within the analysis area is good to excellent throughout the majority of the year. The USDA Forest Service is a member of airshed groups that work cooperatively to minimize or prevent accumulation of smoke; see the "Monitoring, Implementation" Section in this chapter for more information. All burning complies with federal, state and local regulations. All six action alternatives include underburning and pile burning. Although there is no burning proposed for the no action alternative, there is in increased risk of wildfire which would increase the amount of smoke emissions. The following tables display the amount of fuels treatment associated with each alternative for each Ranger District.

Fuels treatments for all action alternatives for all project areas are scheduled to be completed within five years after harvest operations.

Table S-24. Summary of fuels treatment acres, Coeur d'Alene River Ranger District.

Treatment	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Underburn	0	867	867	1,717	373	5,406	304
Wildlife/Eco Burns	0	0	0	**1,628	0	1,628	811
Jackpot Burn	0	0	0	112	0	0	0
Burn Landings	0	1,000	1,000	810	1,030	510	0
Lop and Scatter	0	0	0	6849	0	0	0
Top Attached Yard	0	9,275	9,275	3,420	9,858	2,441	0
Machine Pile & Burn	0	89	89	89	0	187	0
Handpile & Burn	0	0	0	15	0	5	0
Handpile FB	0	0	0	17	0	29	0
Ridgetop FB	0	0	0	0	0	77	0
Trampling FB	0	0	0	2	0	2	0
Total Harvest Acres	0	10,231	10,231	12,223	10,231	8,036	0
Total Treatment Acres*	0	11,231	11,231	14,681	11,261	10,285	1,115
Emissions from burning							
Total tons of PM10	0	443	443	661	386	754	99
Total tons PM2.5	0	375	375	559	327	637	83

** The number of total treatment acres exceeds harvested acres by the burn landings acres.*
*** Identified as an opportunity if funding becomes available.*

Table S-25. Summary of approximate fuel treatment acres, Priest Lake Ranger District.

Treatment	ALT.A	ALT. B	ALT. C	ALT. D	ALT. E	ALT. F	ALT.G
Underburn	**0**	**3,090**	**3,030**	**3,705**	**1,929**	**1,946**	**366**
Burn Landings	**0**	**25**	**25**	**30**	**20**	**25**	**0**
Lop and Scatter	0	1,348	1,408	2,835	2,191	1,412	0
Top Attached Yard	0	276	276	331	237	271	0
Machine Pile & Burn	0	667	667	612	720	381	0
Total Harvest Acres	0	5,381	5,381	7,483	5,077	4,010	0
Total Treatment Acres*	0	5,406	5,406	7,513	5,097	4,035	366
Emissions from burning							
Total tons of PM10	0	406	403	419	363	245	19
Total tons PM2.5	0	343	340	354	311	207	16

** The number of total treatment acres exceeds harvested acres by the burn landings acreage.*

Table S-26. Summary of fuel treatment and fire emissions (FOFEM), Newport planning area.

Fuel Treatment	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Fuel Treatment (acres)							
Underburn	0	896	896	3,269	896	2,443	2,736
Lop and Scatter	0	625	625	1,493	625	941	0
Total Treatment Acres	0	1,521	1,521	4,762	1,521	3,384	2,736
Emissions from burning							
PM10 emissions (lbs/acre)	0	102	102	102	102	102	102
Fuel Treatment	**Alt. A**	**Alt. B**	**Alt. C**	**Alt. D**	**Alt. E**	**Alt. F**	**Alt. G**
Total tons of PM10	0	46	46	167	46	125	140
PM2.5 emissions (lbs/acre)	0	86	86	86	86	86	86
Total tons PM2.5	0	39	39	141	39	105	118

The monitoring of air pollutants during prescribed burning seasons is used to eliminate burning during times when such activities would result in violations of the State standards, including unacceptable impacts to non-attainment areas. The Forest Service voluntarily ceases burning operations to avoid violations of State standards. The monitoring of air pollutants during prescribed burning periods have not recorded any violations of the State standards to date. Burning of activity-created fuels would occur primarily in early spring when demand for airspace has been historically low. Smoke and particulate matter flows to the northeast and dissipates rapidly during good to excellent dispersion days.

Finances

The following provides a summary of the financial appraisal for each of the alternatives for each area. The average predicted bid shows the value of the timber, minus the logging costs (cutting, yarding and hauling) and contractual obligations (road maintenance, slash disposal, road construction, road reconstruction and obliteration). The costs of projects reflect the combination of restoration work accomplished by the timber sale and the Forest Service, including such additional costs as road obliteration, burning and planting. The net value indicates the timber value, minus the value of all the other project costs from the timber sales, other Forest Service work for restoration, and Forest Service administrative costs for sale preparation, administration and planning (NEPA) (planning costs are not attributed to Alternative A - No Action). The 25% Fund to Counties is the estimated amount that each alternative would contribute to the counties in northern Idaho and eastern Washington for roads and schools.

The volume of the proposed timber sales are within the range of previous timber programs on the Colville and Idaho Panhandle National Forests, and is therefore not expected to have an unusual impact on the local timber market, including causing a decrease in the

timber prices that other landowners might receive for their beetle- damaged or killed timber.

Timber Management Financial Viability

Implementing stand-management treatments would depend on having financially viable timber sales that the local forest products industry is willing to purchase. Generating funds to help finance watershed and wildlife projects while having sales that are not below cost is also desirable. For this analysis, all identifiable costs associated with the timber sales (administration, mitigation, monitoring, sale preparation, and sale execution), were included.

Coeur d'Alene River Ranger District

Table S-27. Summary of the Financial Appraisal, Coeur d'Alene River Ranger District

	Alternative						
	A	B	C	D	E	F	G
Estimated Volume (MMBF)	$0	43.6	43.6	51.9	40.5	37.2	0
Weighted Average Predicted Bid Value/MBF	$0	$126	$123	$132	$125	$54	NA
Cost of Projects ($ thousands)	$0	$4,542	$4,432	$6,072	$3,766	$6,707	(1,968)
Net Value (Timber Value - Costs)($ thousand)	$0	$2,358	$2,206	$2,770	$2,355	(768)	($2,775)
25% Fund to Counties ($ thousands)	$0	$1,377	$1,377	$1,714	$1,264	$501	$0

For the Coeur d'Alene River Ranger District, when the action alternatives containing timber sales are viewed as entire projects, only Alternative F shows as being below cost. When viewed as individual potential sale areas, all modeled action alternatives with timber sales could contain below cost sales, i.e.; where projected costs for planning, field prep, and sale administration were not fully covered by projected stumpage. Pending a continued upward trend in the timber market, coupled with field conditions and the freedom to recombine the units with adjacent sale areas, the sale areas could result in minimum bids being above costs. In potential sale areas where contract costs are above predicted bid, road work or units may be shifted to another sale to improve the financial condition at the time of sale package preparation.

Priest Lake Ranger District

Table S-27. Summary of the Financial Appraisal, Priest Lake Ranger District

	Alternative						
	A	B	C	D	E	F	G
Estimated Volume (MMBF)	$0	54.5	55.4	69.9	41.0	34.9	0
Weighted Average Predicted Bid Value/MBF	$0	$200	$165	$204	$198	$189	NA
Cost of Projects ($ thousands)	$0	$4,844	$4,129	$5,827	$3,241	$3,404	(2,424)
Net Value (Timber Value - Costs)($ thousand)	$0	$6,418	$4,700	$8,936	$4,679	$4,018	($3,215)
25% Fund to Counties ($ thousands)	$0	$2,728	$2,284	$3,571	$2,030	$1,647	$0

For the Priest Lake Ranger District, when viewed as entire projects, no timber sale alternatives were below costs. When viewed as individual potential sale areas, all modeled action alternatives with timber sales could contain below cost sales, i.e.; where projected costs for planning, field prep, and sale administration) were not fully covered by projected stumpage. In potential sale areas where contract costs are above predicted bid, road work or units may be shifted to another sale to improve the financial condition at the time of sale package preparation.

Newport Ranger District

Table S-28. Summary of the Financial Appraisal, Newport Ranger District

	Alternative						
Selected Value	A	B	C	D	E	F	G
Estimated Volume (MMBF)	$0	17	17	26	17	37	0
Selected Value	A	B	C	D	E	F	G
Weighted Average Predicted Bid Value/MBF	$0	$145	$145	$184	$144	$222	NA
Cost of Projects ($ thousands)	$0	$626	$626	$1,049	$626	$961	(3,164)
Net Value (Timber Value - Costs)($ thousand)	$0	$1,039	$1,039	$2,887	$1,027	$5,782	($3,647)
25% Fund to Counties ($ thousands)	$0	$606	$606	$1,205	$603	$2,064	$0

For the Newport Ranger District, when viewed as entire projects, no timber sale alternatives were below costs. When viewed as individual potential sale areas, all modeled alternatives except F were not fully covered by projected stumpage. None of the timber sale alternatives have sales where the predicted bid is lower than the timber sale contractual costs and regeneration, indicating that sales would probably sell as proposed.

Cumulative Effects

Timber sales offered under this proposal in the Newport, Priest Lake and Coeur d'Alene areas would be in replacement of other planned sales for the next one to two years on both National Forests, thus an additional large volume of timber would not affect the regional timber market. Additional timber from private and state sources may have already landed in the market at a higher rate that would normally have occurred.

Heritage and Tribal Interests

Heritage Resources include buildings, sites, areas, and objects having scientific, historic, or social values. They comprise an irreplaceable resource relating past human life. There is keystone legislation that protects these resources; please see Chapter II and III of the FEIS for further detail. Disturbance of historic properties could result from proposed activities; however, design features in conjunction with field surveys provide implementation standards that protect these resources. All historic properties would be protected and any effects would be mitigated in consultation with the State Historic Preservation Offices. The Forests have consulted with the Kalispel Tribe of Indians and the Coeur d'Alene Tribe

concerning this project. This consultation resulted in a more thorough treatment of the resources in Chapter III of the FEIS.

Noxious Weeds

Noxious weeds are those plant species that have been officially designated as such by Federal, State or County officials. In *Weeds of the West* by Whitson et al. (1992), a weed is defined as "a plant that interferes with management objectives for a given area of land at a given point in time." President Clinton signed Executive Order #13112 on February 3, 1999 "to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological and human health impacts that invasive species cause...". The Forest Plan provides the following direction for implementing an Integrated Pest Management program: "Noxious weed control will be based on an integrated pest management approach, which includes but is not limited to the current practices of inventory, monitoring, some hand-pulling, and some biological control. Noxious weed control will be conducted in cooperation with counties, other agencies, and private landowners." The overall IPNF strategy is to contain weeds in currently infested areas and to prevent the spread of weeds to susceptible but generally uninfested areas. The 1989 Final Environmental Impact Statement for Weed Pest Management (Idaho Panhandle National Forests) describes the management strategy.

The spread of noxious weeds can primarily be attributed to human-caused dispersal such as vehicles and roads (Roche and Roche 1991), contaminated livestock feed, contaminated seed, and ineffective revegetation practices on disturbed lands (Callihan et al. 1991). The introduction of noxious weeds has occurred throughout the project area, especially along major highways and travel routes, and areas within the forest that have experienced disturbance from intense recreation, road construction, and timber harvest activities. Non-native species can impact the native flora and reduce native biodiversity, especially in diverse habitats like riparian zones, sensitive communities like wetlands, or inherently rare plant communities in peatland fens and seeps.

Based on the information on susceptibility of broad scale cover types found on the three Ranger Districts, the table below represents the amount of habitat vulnerable to invasion by one or more weed species.

Table S-29. Coeur d'Alene River Ranger District. Acres of susceptible vegetative cover types in areas potentially affected by harvest activities, by alternative.Acres under Alternative A are the cover types resulting from beetle activity. Acres under the action alternatives are those cover types predicted from proposed treatments.

Forest Cover Type	Alt A*	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G**
Interior Douglas-fir	18,287	5,914	5,914	7,391	5,914	4,642	576
Interior ponderosa pine	471	166	166	234	166	155	202
Grand fir	4,886	2,491	2,491	2,909	2,491	2,001	337
Lodgepole pine	18	17	17	17	17	11	0
Western redcedar	631	371	371	374	371	202	0

Forest Cover Type	Alt A*	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G**
Western larch	573	272	272	275	272	182	0
Western hemlock	682	371	371	375	371	262	0
White pine	106	53	53	56	53	40	0
Total acres	**25,654**	**9,655**	**9,655**	**11,631**	**9,655**	**7,495**	**1,115**

Table S-30. Priest Lake Ranger District. Acres of susceptible vegetative cover types in areas potentially affected by harvest activities (including fuels treatments), by alternative. Acres under Alternative A are the cover types resulting from beetle activity. Acres under the action alternatives are those cover types predicted from proposed treatments.

Forest Cover Type	Alt A*	Alt B	Alt C	Alt D	Alt E	Alt. F	Alt. G**
Western redcedar	2,614	293	293	581	321	163	0
Grand fir/hemlock	2,637	746	770	1,218	1,194	751	0
Interior Douglas-fir	4,514	931	931	1,604	1,643	981	0
Interior ponderosa pine	137	2,259	2,259	2,624	1,324	1,580	366
Spruce/subalpine fir	13	3	3	3	3	0	0
Western larch	316	1,009	1,025	1,292	498	484	0
Lodgepole pine	37	5	5	12	5	0	0
No data	356	0	0	0	0	0	0
Total acres	10,624	5,246	5,286	7,334	4,988	3,959	366

Table S-31. Newport Ranger District. Acres of susceptible vegetative cover types in areas potentially affected by harvest activities (including fuels treatments), by alternative. Acres under Alternative A are the cover types resulting from beetle activity. Acres under the action alternatives are those cover types predicted from proposed treatments.

Forest Cover Type	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Western Redcedar	361	193	193	164	193	0	0
Grand fir/western hemlock	583	0	0	257	0	120	25
Interior Douglas-fir	3,729	1,297	1,297	3,870	1,166	2,826	2,299
Interior Ponderosa pine	0	0	0	133	0	133	80
Western larch	29	29	29	29	29	0	29
Spruce/subalpine fir	0	0	0	0	0	0	0
Lodgepole pine	488	0	0	303	185	303	303
Total	5,190	1,519	1,519	4,756	1,573	3,382	2,656

***Stands included under Alternative A are beetle-affected areas characterized by cover types which have a "high" risk rating for weed invasion--those cover types in which one or more weed species may invade in the absence of intense or frequent disturbance.**

****Alternative G acreage includes stands that are proposed for underburning which have a high risk rating for weed invasion.**

While existing infestations of certain weed species may continue to increase on Federal lands and adjacent private lands, proposed activities in action alternatives would minimize the risk of weed spread by application of the Noxious Weed design criteria and mitigation measures stated in Chapter II of the FEIS. Weed treatment and prevention practices as proposed would minimize, but not eliminate, the risk of weed spread.

Plants, Threatened and Sensitive

A Threatened species, as determined by the US Fish and Wildlife Service, is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Currently, the US Fish and Wildlife Service (USDI 1999) indicates two species listed as threatened for the Coeur d'Alene portion of the Idaho Panhandle National Forests (IPNF), **water howellia** (*Howellia aquatilis*) and **Ute ladies'-tresses** (*Spiranthes diluvialis*).

There are no Federally listed Endangered plant species suspected to occur in the Idaho Panhandle National Forests. There are no Threatened or Endangered plants known or suspected for the Colville Ranger District.

The recent Douglas-fir beetle outbreak has not affected suitable habitat for Ute ladies'-tresses or water howellia. There are no proposed harvest or project-related activities in or adjacent to potentially suitable habitat for these species. It was determined that implementation of any alternative would have no effect on Ute ladies'-tresses, water howellia or their habitat. A Biological Assessment addressing both species is included in the project file.

There are documented occurrences of listed **Sensitive** and other rare[1] plants in the priority areas on various project areas. **Sensitive and rare plant** species may be assigned to one or more rare plant guilds. These guilds are artificial assemblages based on similar habitat requirements of two or more rare plant species (see Appendix B of the FEIS). Rare plant guilds in which sensitive plant species occur include the following: aquatic, deciduous riparian, peatland, wet forest, moist forest, dry forest, and subalpine. These are listed below separately by Ranger District.

Table S-32. Coeur d'Alene Ranger District, Sensitive and rare plant occurrences in Priority areas

Species	common name	Occurrences
Botrychium lanceolatum	triangle moonwort	1
Carex hendersonii	Henderson's sedge	25
Cetraria sepincola	eyed ruffle lichen	1
Cypripedium fasciculatum	clustered lady's slipper	1
Eburophyton austiniae	phantom orchid	3
Hypericum majus	large Canadian St. John's wort	1
Ludwigia polycarpa	many-fruit false-loosestrife	1
Mimulus clivicola	bank monkeyflower	3
Platanthera orbiculata	round-leaved orchid	5
Scirpus subterminalis	water clubrush	1
	Total Occurrences	43

[1] Rare plant: Forest Species of concern, see chapter 3.

Table S-33. Priest Lake Ranger District, Sensitive and rare plant occurrences in Priority areas

Species	common name	Occurrences
Blechnum spicant	deerfern	12
Botrychium lanceolatum	triangle moonwort	3
Botrychium minganense	Mingan moonwort	18
Botrychium montanum	western goblin	5
Botrychium paradoxum	peculiar moonwort	1
Carex buxbaumii	Buxbaum's sedge	2
Cladonia imbricarica	imbricate lichen	1
Collema curtisporum	short-spored jelly lichen	10
Dryopteris cristata	crested shield fern	2
Epilobium palustre	swamp willow-weed	1
Gaultheria hispidula	creeping snowberry	2
Hypericum majus	large Canadian St. John's wort	1
Lycopodium dendroideum	groundpine	8
Lycopodiella inundata	northern bog clubmoss	1
Petasites sagittatus	arrowleaf coltsfoot	1
Phegopteris connectilis	northern beechfern	2
Platanthera orbiculata	round-leaved rein orchid	16
Rubus spectabilis	salmonberry	1
Sanicula marilandica	black snakeroot	14
Scheuchzeria palustris	pod grass	1
Scirpus subterminalis	water clubrush	1
Trientalis arctica	northern starflower	2
Vaccinium oxycoccos	bog cranberry	1
	Total Occurrences	106

Table S-34. Newport Ranger District, Sensitive plant occurrences in Priority areas

Orobanche pinorum	pine broomrape	7
Botrychium crenulatum	dainty moonwort	1
	Total Occurrences	8

Suitable habitat for moist forest and dry forest guild species have the highest likelihood of potential affects from the beetle outbreak and the proposed activities on the project areas. Limited wet forest and cold forest guild habitat will be affected, and no activities are proposed that would affect habitats suitable for peatland, aquatic, deciduous riparian, or subalpine species. For the Priest Lake Ranger District, a very small number of acres of peatland habitat is proposed for surveys to ensure appropriate buffers from harvest activity. There are no activities occurring in peatland habitat and no activites would occur that would alter the nutrient content or hydrologic processes of these habitats.

Surveys are being completed on suitable habitat potentially affected by the proposed activities. Additional surveys will occur for activities like new road construction, road obliteration and watershed restoration activities (see Chapter III of the FEIS).

Existing populations of Sensitive or rare plants would be protected. Surveys of suitable habitat will occur prior to project implementation, and new populations discovered would

be protected from adverse effects that could trend towards federal listing or cause a loss of population or species viability.

Recreation

Recreational activities in the project area include camping, hunting, gathering forest products (i.e. berry picking), driving for pleasure, snowmobiling, hiking, horseback riding, all terrain vehicle riding, (motorcycles, and 3 or 4 wheeled ATV's), picnicking and fishing. Access to the areas to enjoy outdoor recreation is provided by National Forest System roads and trails. Some recreational activity takes place on older roads that are not part of the maintained road system; these are mainly motorcycle and ATV riding, with some hiking and horseback riding. The recreational opportunities afforded visitors to the areas is in a setting that has been roaded and subject to various degrees of timber harvest but is still natural appearing.

The evaluation of the effects to the recreational resource can seldom be measured quantitatively. Often qualitative judgments must be made. There would be no changes for Alternative A, the No Action Alternative. The action alternatives would have effects as presented here and in detail in Chapter II of the FEIS. Mitigations to ensure minimal interruption of recreational uses have been developed and are in Chapter II of the FEIS. There are no large roadless or primitive areas affected by proposed activities. No developed recreational facilities will be directly or indirectly affected by proposed actions. Access to the areas by roads would be maintained to all developed recreational sites and National Forest system recreational trails. The opportunity to use old roads for recreational pursuits would be maintained as well; although some of these roads that have been used by people could be altered or obliterated. There may be temporary interruption of use of some trails. No system hiking trails would be eliminated but there may be some relocation of these trails.

For the Coeur d'Alene River Ranger District (for all action alternatives) snowplowing could interrupt trails (Forest Road 206, 437, 1535, 796 & 400) and impact some parking areas at the Fernan Saddle trailhead. For all action alternatives, it is probable that public use of the following trails would be temporarily interrupted; Bud Howard Trail 29, Canfield Huckleberry Trail 28, Beauty Carlin Trail 257 and the Caribou Ridge Trail 79.

For the Priest Lake Ranger District (on all action alternatives except Alternative F), approximately 11 miles of snowmobile trail would be removed from the Washington groomed trail system due to the obliteration of the Consalus and Goose Creek roads. For all action alternatives, snowplowing may interrupt snowmobile uses on a number of roads: Forest Roads 638, 1347, 1340, 2512, 313, 1351, 312, 219, 333, & 305.

For the Newport Ranger District, there could be interruptions for recreational uses due to timber harvest activity; this would be dependent on whether there would be summer or

winter logging. The effects would include temporary closures of some dispersed campgrounds, logging traffic and snow plowing some snowmobile routes.

The opportunity to enjoy recreational activities in a roaded but natural appearing wildland setting would be retained in any alternative, including the no action alternative.

Scenery

Overall, the scenic character of the analysis areas through time has been a forested environment with a mixture of tree species. One of the main goals of scenic management on National Forests is to maintain natural -appearing landscapes.

Coeur d'Alene River Ranger District: For Alternative A, the no action alternative, effects of beetle infestation are readily visible from most of the key viewpoints in the analysis area. Cumulatively, the combined effects of insect infestation and disease are creating many visible openings in fir-dominated forest land in northern Idaho. Instead of uninterrupted blankets of trees, there are numerous small clearings that create a mixed pattern. This alternative does pose a greater risk due to scenic changes that could occur from potential large wildfires.

Each of the action alternatives would create enough openings in tree canopy to be noticed from the wide range of views possible in the developed areas, in valleys as well as rural residential areas on ridge-tops. Alternative D would have the greatest impact on the scenic quality of all the evaluated alternatives. Some of the units in this alternative may not meet the Idaho Panhandle Forest Plan objectives for visual quality, over the short term. For the action alternatives, Alternative G would have the least effect on the visual condition of the areas, but openings in the forest would still be evident due to the beetle infestation effects. Special mitigations were developed for certain units on the Hayden Lake face in order to ameliorate potential views with some alternatives. Please see Chapter II of the FEIS for further detail.

Priest Lake Ranger District: For Alternative A, the no action alternative, effects of beetle infestation are readily visible from most of the key viewpoints in the analysis area. Cumulatively the combined effects of insect infestation and disease are creating many visible openings in fir-dominated forest land in northern Idaho. Instead of uninterrupted blankets of trees, there are numerous small clearings that create a mixed pattern. This alternative does pose a greater risk due to scenic changes that could occur from potential large wildfires.

Of the action alternatives, Alternative G would provide the highest Scenic Integrity and Landscape Character of the landscape. Barring the risk of wildfire, under the No Action Alternative scenic integrity and landscape character would remain high. All potential harvest units in all alternatives meet the Idaho Panhandle Forest Plan Standard for scenic quality.

Newport Ranger District: For Alternative A, the no action alternative, there is a high probability of some continuous patches of Douglas-fir being reduced below 40 percent existing canopy closure. This level of mortality would be visually noticed. The natural occurrence of insects will continue to evolve the landscape. This alternative does pose a greater risk due to scenic changes that could occur from potential large wildfires.

Of the action alternatives, Alternative E has the least acres affected for the overall cumulative effects. Alternative D would have the most. All potential harvest units in all alternatives meet the Colville Forest Plan Standards for scenic quality.

Soil Productivity

Soil productivity is the output of a specified plant or group of plants under a defined set of management practices, or total plant mass produced annually per unit area. Most of the productivity on all project area soils is found near the soil surface. This is also the part of the soil that is easiest to disturb by management activities. Design criteria and mitigation measures were developed to address three issues: 1) detrimentally disturbed soils, 2) low potassium sites, 3) maintenance of large woody debris and organic matter. All alternatives would strive to maintain at least 80 percent of the activity area in a condition of acceptable productivity potential for trees and other managed vegetation; large woody debris would follow research guidelines of Graham, et. al., 1994, to insure the maintenance of site productivity.

Wildlife (Effects on selected species)

Wildlife populations are inextricably tied to a mosaic of vegetative patterns that continually shift in form and substance in response to ecosystem processes and disturbances. The current condition of wildlife habitat is directly related to ecological disturbances, either natural or human caused, that has influenced the forested landscape patterns in and around the project areas. Without disturbance, such as fire or insect/disease outbreaks, vegetation follows a predictable sequence of change. As vegetation moves through each sequence of succession, wildlife species shift accordingly. Each species possesses a certain successional strategy. Some species are adapted to the early stages of forest development, while others are more suited to older forests.

Changes in the vegetative composition (relative size, and arrangement of habitat components) and structure can have either positive or negative effects on wildlife habitat, animal populations and their distribution. Human development (i.e. roads) has reduced the amount of habitat for some wildlife species and made some species more vulnerable to poaching/harassment, hunting loss and displacement than in the past.

A number of wildlife species were selected for a detailed discussion because the proposed activities may have a measurable affect on their habitat or populations.

The following tables were developed for this Summary only in order to present a brief comparison of the alternatives for the wildlife resource; please see Chapter III of the FEIS under Wildlife to fully compare the alternatives. The tables present differences in effects by species and **do not provide a quantitative rating.** They are designed to make a comparison between alternatives using Alternative A as the baseline. This does not illustrate a viability determination. Discussion on viability determinations are presented under Wildlife for each Ranger District. Due to differences in the amount and type of information available, e.g. life histories, a rating for one species may not compare directly with the same rating for another species. The tables use the following attributes:

No effect = unmeasureable effect or compensating adverse and beneficial effects
Minor = individuals not likely affected
Moderate = individuals may be affected, but populations would not be affected
High = populations may be affected
The attached +/- help show the relative differences between alternatives.

Coeur d' Alene River Ranger District

The wildlife species analyzed in detail for the Coeur d'Alene River Ranger District include:

Threatened Species - bald eagle
Proposed Species - Canada lynx
Sensitive Species - flammulated owl/white-headed woodpecker, northern goshawk, fisher and CDA salamander
Management Indicator Species - elk and American marten

Table S-35. Coeur d'Alene Wildlife

Wildlife	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
grizzly bear	minor	minor-	minor-	minor–	minor-	minor-	minor
Canada lynx	minor	minor-	minor-	minor-	minor-	minor-	minor
fisher/marten	minor	minor-	minor-	moderate	minor-	minor-	minor+
flammulated owl/ white headed woodpecker	minor	minor	minor	minor+	minor	minor+	minor+
N. goshawk	minor-	minor-	minor-	minor–	minor-	minor-	minor-
CDA Salamander	minor	minor	minor	minor	minor	0	minor
elk	0	0	0	0	0	0	0

Priest Lake Ranger District

The wildlife species analyzed in detail for the Priest Lake Project include:

Threatened Species - grizzly bear
Proposed Species - Canada lynx
Sensitive Species - flammulated owl/white-headed woodpecker, northern goshawk and fisher
Management Indicator Species - American marten

Table S-36. Priest Lake Wildlife

Wildlife	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
grizzly bear	0	minor++	minor++	minor++	minor++	minor++	minor++
Canada lynx	0	minor+	minor+	minor+	minor+	minor+	minor+
fisher/marten	minor-	minor–	minor–	minor–	minor-	minor–	minor-
flammulated owl/ white- headed woodpecker	minor+	minor++	minor++	minor++	minor++	minor++	minor+
N. goshawk	minor-	minor–	minor–	minor–	minor-	minor-	minor-

Newport Ranger District

The wildlife species analyzed in detail for the Newport Project Areas include:

Threatened Species - grizzly bear & bald eagle
Endangered Species - gray wolf & peregrine falcon
Proposed Species - Canada lynx
Management Indicator Species - blue grouse, pine marten, elk and deer, woodpeckers
Species of concern - northern goshawk

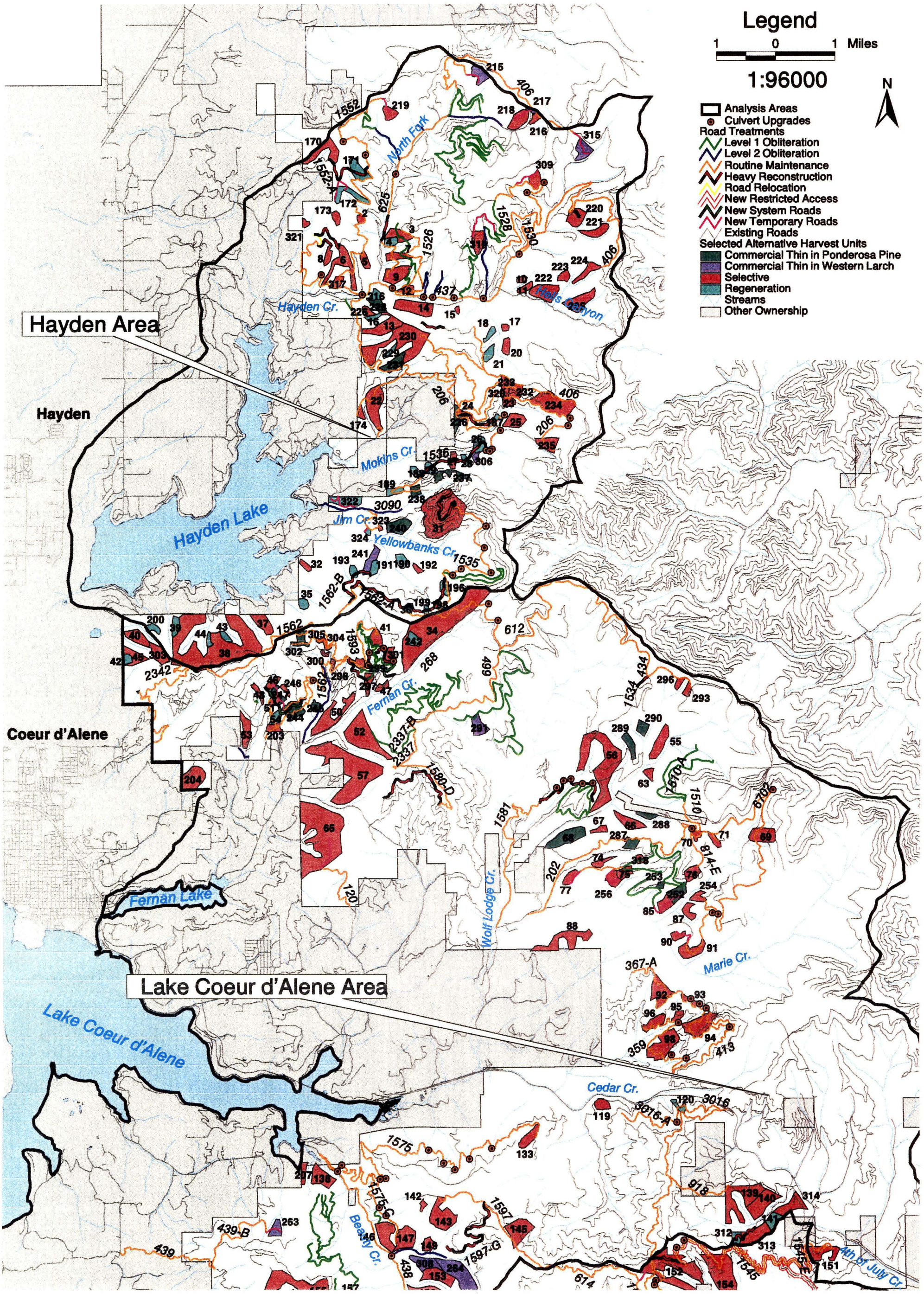
Table S-37. Newport Wildlife

Wildlife	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
grizzly bear	0	0+	0+	0+	0+	0+	0+
bald eagle	0	0	0	0	0	0	0
gray wolf	0-	0+	0+	0+	0+	0+	0+
peregrine falcon	0	0	0	0	0	0	0
Canada lynx	0	0+	0+	0+	0+	0+	0+
blue grouse	minor-	minor-	minor-	minor-	minor-	minor-	minor-
marten	minor+	minor-	minor-	minor-	minor-	minor-	minor-
elk & deer	minor-	minor+	minor+	minor+	minor+	minor-	minor+
woodpeckers	minor++	0	0	minor-	0	minor-	0
N. goshawk	minor+	0	0	0	0	0	0

This completes this Summary document of the Douglas-fir Beetle Project FEIS. If you have any questions or would like further information, please feel free to call us at the numbers listed on the first page of this document.

Douglas-Fir Beetle Project Coeur d'Alene River Ranger District

CDA Map 1 Area - Selected Alternative



Douglas-Fir Beetle Project Coeur d'Alene River Ranger District

CDA Map 2 Area - Selected Alternative

Legend

1 0 1 Miles

1:96000

N

- Analysis Areas
- Culvert Upgrades

Road Treatments

- Level 1 Obliteration
- Level 2 Obliteration
- Routine Maintenance
- Heavy Reconstruction
- Road Relocation
- New Restricted Access
- New System Roads
- New Temporary Roads
- Existing Roads

Selected Alternative Harvest Units

- Commercial Thin in Ponderosa Pine
- Commercial Thin in Western Larch
- Selective
- Regeneration
- Streams
- Other Ownership

Lake Coeur d'Alene

Lake Coeur d'Alene Area

Cedar Cr.

Beauty Cr.

Fortier Cr.

4th of July Cr

Carlin Cr.

Cottonwood Cr.

Killarney Lake

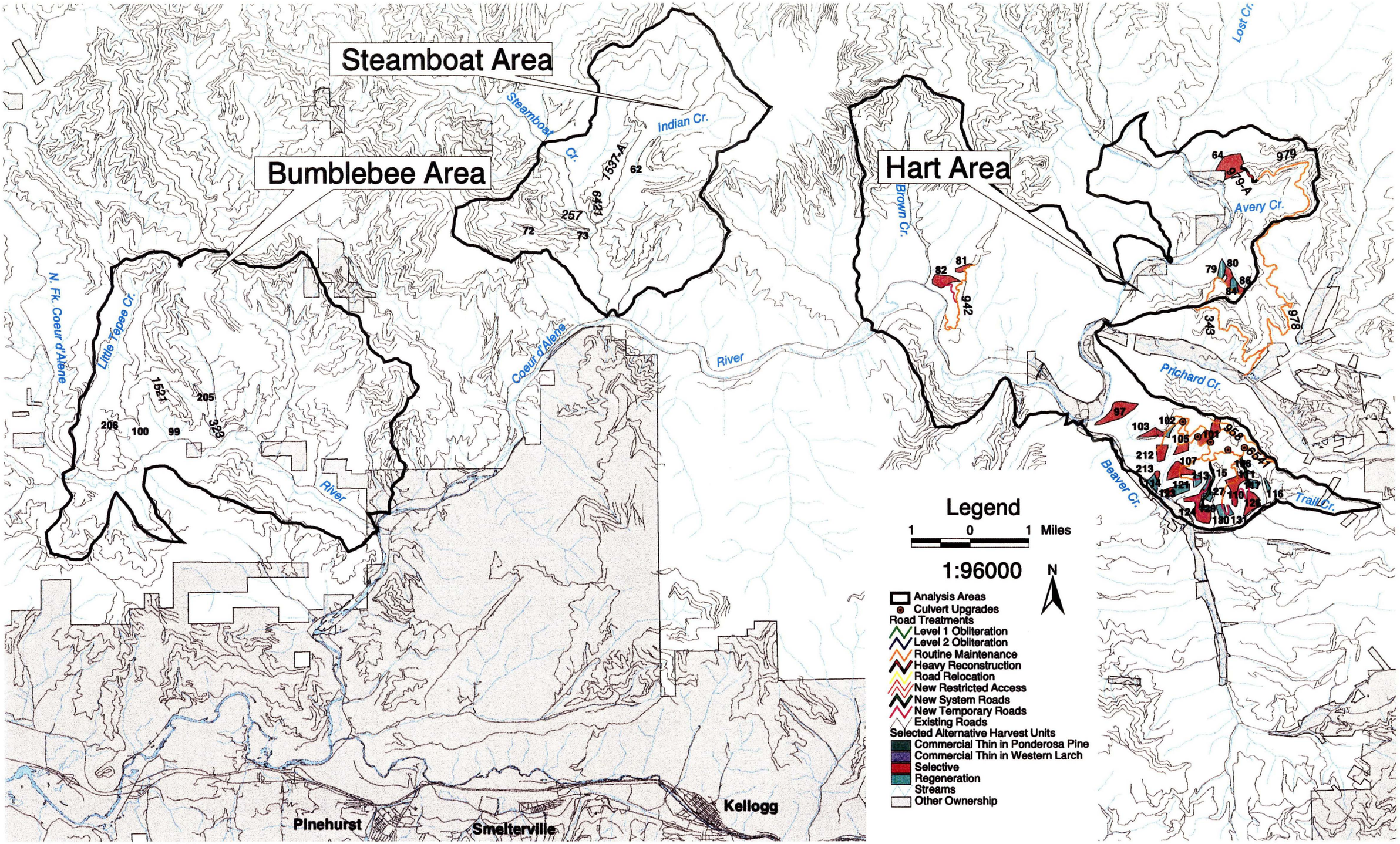
Chain Lakes Area

Coeur d'Alene River

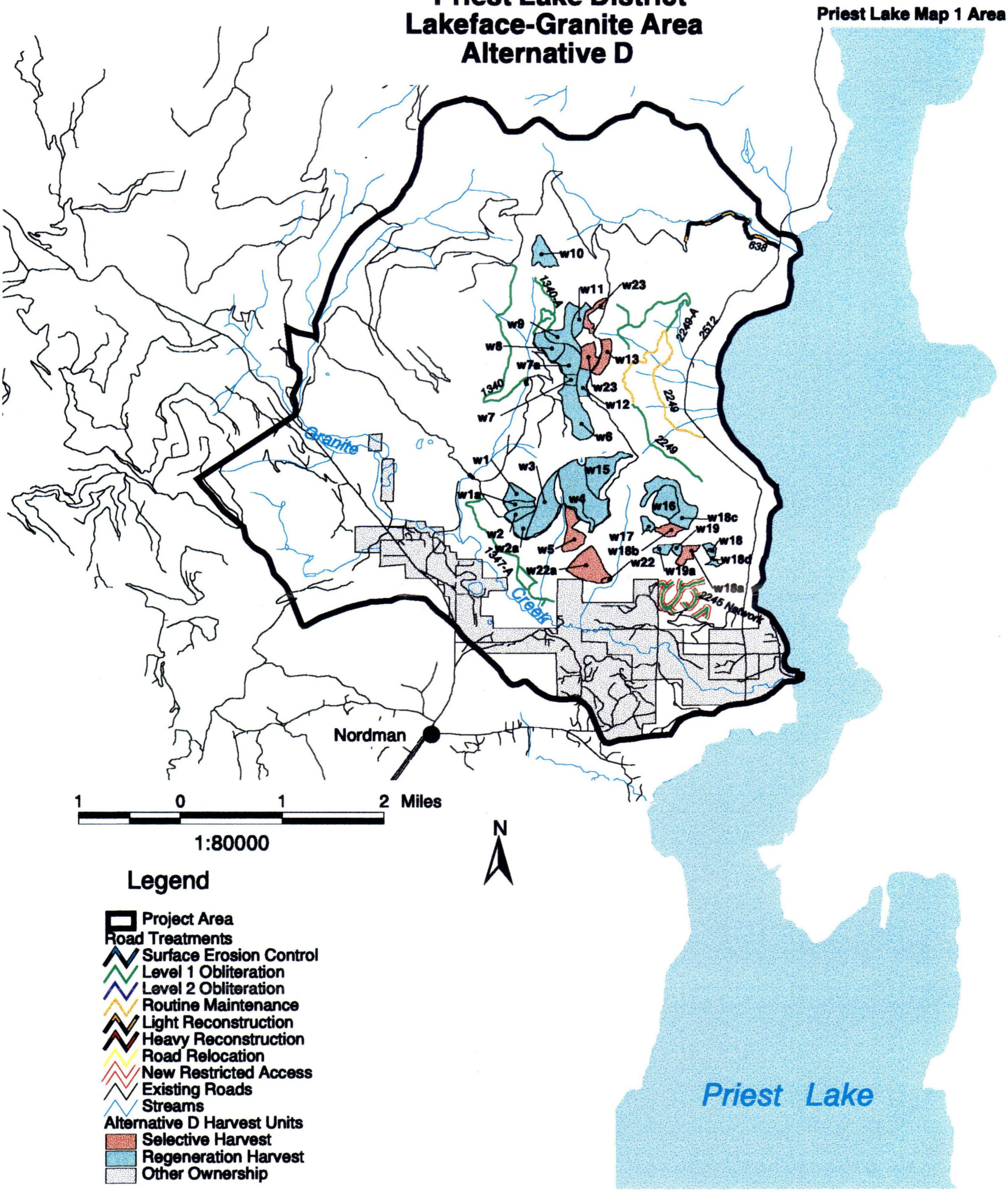
Harrison

Douglas-Fir Beetle Project Coeur d'Alene River Ranger District

CDA Map 3 Area - Selected Alternative



Douglas-fir Beetle Project
Priest Lake District
Lakeface-Granite Area
Alternative D



Legend

- Project Area

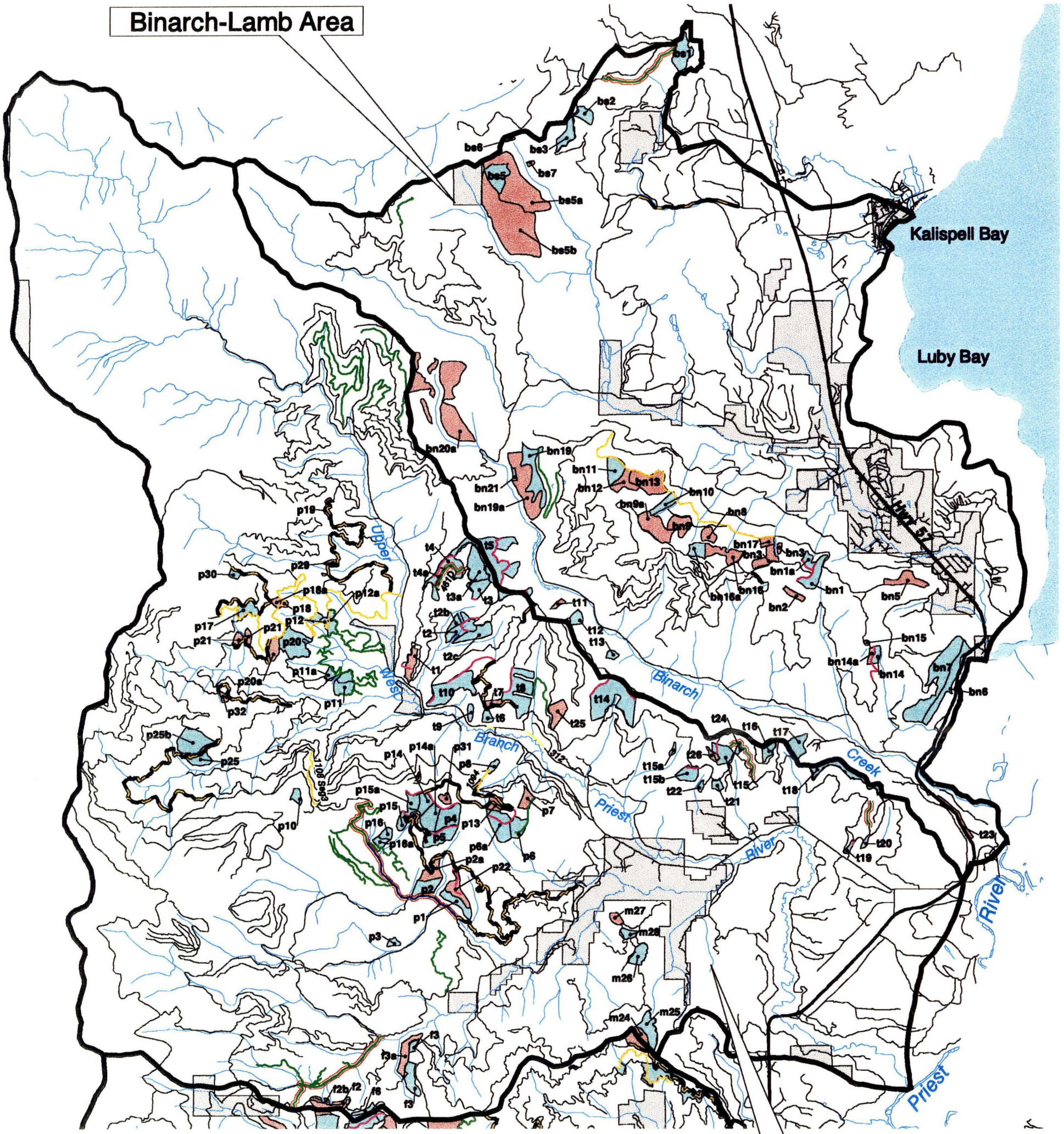
Road Treatments

- Surface Erosion Control
- Level 1 Obliteration
- Level 2 Obliteration
- Routine Maintenance
- Light Reconstruction
- Heavy Reconstruction
- Road Relocation
- New Restricted Access
- Existing Roads
- Streams

Alternative D Harvest Units

- Selective Harvest
- Regeneration Harvest
- Other Ownership

Douglas-fir Beetle Project
Priest Lake District
Upper West Branch / Binarch-Lamb Areas
Alternative D



Priest Lake Map 2 Area

Legend

- Project Areas

Road Treatments

- Surface Erosion Control
- Level 1 Obliteration
- Level 2 Obliteration
- Routine Maintenance
- Light Reconstruction
- Heavy Reconstruction
- Road Relocation
- New Temp Roads
- New Restricted Access
- Existing Roads
- Streams

Alternative D Harvest Units

- Selective Harvest
- Regeneration Harvest
- Other Ownership

N

1 0 1 2 Miles

1:80000

Douglas-fir Beetle Project
Priest Lake District
Lower West Branch / Quartz Areas
Alternative D

Priest Lake Map 3 Area

Lower West Branch Area

Quartz Area

Lower West Branch

Priest River

Priest River

HWY 57

Legend

- Project Areas

Road Treatments

- Surface Erosion Control
- Level 1 Obliteration
- Level 2 Obliteration
- Routine Maintenance
- Light Reconstruction
- Heavy Reconstruction
- Road Relocation
- New Temp Roads
- New Restricted Access
- Existing Roads
- Streams

Alternative D Harvest Units

- Selective Harvest
- Regeneration Harvest
- Other Ownership

N

1 0 1 2 Miles

1:80000